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Nyrop Cites Steps Taken To Assist Civil Aviation

Initial steps taken by the Prototype Aircraft Advisory Committee to test and develop advanced prototype aircraft were outlined by Donald W. Nyrop, Administrator of Civil Aeronautics, in an address before the Aero Club of Washington, D. C., January 23. The Administrator also listed positive accomplishments of the Civil Aeronautics Administration to cope with the international emergency.

Necessary defense order ratings have been issued to cover delivery in 1951 and 1952 of 194 new United States air carrier aircraft, costing more than \$170,000,000, he said, and actions are pending on 3 additional air carrier planes, which will take care of all such aircraft which were on order November 1.

The CAA has authorized individuals in most of the airlines to place "DO" ratings on orders for parts and equipment needed to keep this essential mode of transportation operating, he added. The allotments granted come to an amount substantially the same as the \$201,000,000 a year which the airlines estimated they would require for this purpose.

In addition, authorization has been obtained from the National Production Authority to issue "DO" ratings on equipment necessary for establishment and operation of the federal airways system.

Requirements Office Created—An Office of Aviation Defense Requirements has been created within the CAA to administer priorities and allocations for civil aviation, the Administrator said, and tentative plans call for a staff of about 100 people in Washington and in the regions.

Upon the regions will fall the responsibility for screening the requests of the great number and variety of non-air-carrier operators, he said, and the regions will call upon advisory panels from the industry to assist in setting fair standards for measuring the relative importance to defense of various flying operations and for establishing the legitimate supply requirements of such operations.

Once the CAA office has compiled total requirements of claimant agencies, it submits this program for review by a newly established division of the Air Coordinating Committee, Mr. Nyrop continued. "Air Force and Navy, among other agencies, will be represented in this division, so that the stamp of approval from this division will help insure that genuine defense requirements of civil aviation will receive due recognition," the Administrator pointed out.

"After getting the recommendations of the CAA, the National Production Authority will authorize any defense orders or directives which may be necessary to carry out this program," he continued. "The NPA then will forward the program to the Munitions Board for integration with the military program. As things get tighter, this integration will require establishment of priorities between civil and military types of aircraft by an aircraft committee of the Munitions Board on which CAA will be represented, and also estimates by the Aircraft Production Resources Office at Dayton of the materials necessary.

"In the present situation, however, the Munitions Board, with NPA sanction, has been able to let the CAA use the military 'DO' number to cover the immediate requirements of civil aviation for new aircraft and for parts."

(Continued on page 18)

CAA Establishes Defense Office For Priorities

Creation of an Office of Aviation Defense Requirements within the CAA to administer priorities and allocations for civil aviation was announced January 23 by Donald W. Nyrop, Administrator of Civil Aeronautics.

The office is headed by G. R. Gaillard, who has been CAA standardization coordinator since World War II. During the last war, Mr. Gaillard, as an Air Force colonel, served on Gen. H. H. Arnold's staff assigned to the Working Committee Aeronautical Board. This board worked closely with the standardization, conservation, and allocation committees established by WPB.

The immediate responsibility of the Office of Aviation Defense Requirements will be to handle "DO" defense rated orders for new air carrier aircraft and for necessary spare parts and equipment to keep United States and allied foreign carriers in operation.

The National Production Authority has authorized the CAA through the Department of Defense, to issue "DO" orders covering new carrier aircraft on order as of November 1, 1950. These orders involve 113

(Continued on page 15)

Personal Aircraft Inspection Manual Is Issued

A practical guide for the personal aircraft owner in inspecting his plane for better maintenance and safer flying is offered by the Civil Aeronautics Administration in the form of the "Personal Aircraft Inspection Manual" just placed on sale at the Government Printing Office, Washington 25, D. C., for 55 cents.

Designed especially for use by student mechanics, pilots, and especially for personal aircraft owners, the 80-page, illustrated manual concentrates attention on the inspection process, pointing out that inspection is one of the three major elements of proper maintenance of the airplane.

This manual tells the owner or student of maintenance what places to inspect for possible wear and tear, where to look for possible defects, and, in general, when such inspections should be made. Use of the manual by the novice "does not qualify him to

make final determinations regarding the airworthiness of the aircraft," says the manual, but following its advice will certainly make for safer flying and more economical upkeep.

The manual indicates helpful practices in preventative maintenance which the owner can perform, but it urges that a "competent repair station or mechanic" be called upon to make important repairs, or to make an inspection after a plane has been in an accident or subjected to unusual loads or stresses.

The manual, CAA officials say, will be helpful to every flying club and conscientious plane owner, and it should be useful to flight and mechanic schools as a text for study. Its use in conjunction with the manufacturer's service handbook is strongly recommended.

The manual was prepared by the personal aircraft and agencies branch of the Office of Aviation Safety.

Civil Air Transportation Expansion

In Emergency Likely, Rentzel Says

Three objectives of the Civil Aeronautics Board for 1951 were outlined and discussed by Chairman Delos W. Rentzel of the Board in an address last month before the Aviation Writers Association in Washington. He stressed the importance of air transportation in the mobilization of the Nation's industrial and military might.

"In World War II we were forced to reduce our domestic civil air fleet by nearly 50 percent almost immediately after Pearl Harbor in order to supply the nucleus of transport aircraft to the military forces," he said. "Well, I can tell you that this time if such an emergency develops that the situation will be somewhat different. We and the military are in agreement that civil air transport, instead of being reduced, in all probability must be expanded," he continued. "This is one of the lessons, at least, that we learned in World War II. The importance to our production arsenal of a high-speed transportation system within the United States that is second to no other medium of transportation must be continued and increased to adequately serve war needs."

The Chairman cited figures to show the rapid development of air transportation since 1941, pointing out that at the beginning of 1941 civil transport aircraft on hand totaled 437, against more than 1,215 transport aircraft in scheduled service at the end of December 1950.

Board's Responsibilities Outlined.—"With the lessons of 5 war and 5 postwar years behind us," Mr. Rentzel said, "and with the facts of our present air transport strength before us, the Board's duties and responsibilities in 1951 will be directed toward three particular objectives: (1) to improve the efficiency of the Board's organization and operations so we may more efficiently encourage, regulate, and assist the development of American civil aviation; (2) to plan clearly and carefully for a steady and continued growth and development of peacetime air transportation; and (3) to coordinate all planning and development so that all our civil aviation resources will be immediately available to fulfill a powerful and proper role in the advent of war."

He said that the plan of the Board for 1951 is "to do all we can to concentrate on essentials" and "let the frills go by."

He pointed out that in connection with the continued peacetime economic development of civil aviation, the Board in November established a planning staff composed of top level Board personnel to advise the Board in connection with the re-examination and establishment of Board policy covering air transportation problems. He listed some of the matters being considered for planning purposes as follows:

"(1). The evaluation of the domestic route structure looking toward the elimination of uneconomic competition and the bringing about of desirable mergers where such mergers would result in improving the air transportation map of this country and in substantial public benefits and lower mail rates. One phase under consideration is suspension, preferably voluntary, of service by trunk air carriers at marginal points.

"(2). The Board will seek ways and means of giving positive encouragement and assistance to the attainment of self sufficiency of our domestic trunk line air carriers through general improvement of the route and fare structure and through the careful review of the necessity for submarginal trunk line service—or their performance, where desirable, by local airlines.

"(3). The Board proposes to have its planning group make a more complete delineation of the purposes, functions, and costs of local airline opera-

tions. The Board intends that these local carriers shall remain local carriers under basic Board policy. To further emphasize this policy we are considering the issuance of a different type of certificate of public convenience and necessity under which these carriers will operate. The Board is aware that service by the local carriers, although containing many elements of success, has been dependent upon Government support in a substantial degree. Consequently, though we are optimistic about the final result—the ultimate goal of these local carriers attaining economic self sufficiency will be a very important factor in reaching a sound judgment in each certificate renewal case. Furthermore, the Board has clearly advised local carriers and communities alike that unless local service is used no real justification will exist for its continuance.

"(4). The Board's policy planning group and the Board itself will intensify its efforts to develop a more specific policy and program designed to accomplish the early separation of subsidy and compensatory air mail payments. We desire to have a clear idea of where the industry and its individual air carriers stand with respect to self sufficiency and what progress is now being made toward the ultimate goal of self sufficiency before mail pay. The Board's study and work on this subject will complement but not duplicate a study now being made by the Senate Interstate and Foreign Commerce Committee. The Board will seek to arrive at a service rate of pay, that is, the amount of money required to be paid for the actual physical transportation and handling of the mail itself. The Committee, on the other hand, seeks to allocate the subsidy element as between the points served on an air carrier's system.

"(5). Further development of a definite and final Board policy with respect to the air transportation services provided by the large irregular air carriers.

"(6). The development of a firm and definite Board policy with respect to the provision of adequate air transportation service to and within United States territories and trust territories.

"(7). Completion of the overhaul of safety regulations and the improvement of safety regulations and the furthering of new safety devices begun in 1950 in cooperation with the Civil Aeronautics Administration of the Department of Commerce."

Transportation Development Discussed.—The Chairman discussed in some detail expenditures of public funds to support transportation development, which, he pointed out, began with the building of "post roads" by the Government so that the early stage coach lines could have safe highways over which to transport passengers and mail.

Commercial air transportation, he continued, could not have developed to even a fraction of its present size or importance without the use of public funds to assist it and partly support it in the early years of its development. Although it undoubtedly will be necessary to continue to provide some financial assistance in the future, he added, progress is being made toward less and less Government support.

"For example," he continued, "back in 1939, which was the first full fiscal year of Board operations, the U. S. Government paid \$2.15 per mail ton-mile for mail carried on the certificated domestic trunk air-

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DEPARTMENT OF COMMERCE
Charles Sawyer, Secretary

Civil Aeronautics Administration
Donald W. Nyrop, Administrator

Ben Stern, Director
Office of Aviation Information

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350 Civil Aircraft Engines Shipped During November

The civil aircraft engine industry shipped 350 engines, representing 144,400 horsepower, valued at \$1,840,000, during November 1950, according to a report issued jointly by the Civil Aeronautics Administration and the Bureau of the Census, Department of Commerce.

Cumulative shipments for the first 11 months of 1950 totaled 3,952 engines and 1,455,300 horsepower. In the same period of 1949, civil shipments totaled 3,814 engines and 1,108,100 horsepower.

Figures on November civil aircraft engine shipments follow:

Civil Aircraft Engine Shipments

	1950		1949
	November	October	November
Number (total)....	350	340	192
Horsepower (thousands)...	144.4	83.4	82.0
Value (thousand dollars)...	\$5,532	\$4,245	\$3,261
Complete engines.....	1,840	850	964
Parts.....	3,562	3,237	2,029
Other products.....	130	158	268

Airport Drainage Information Given

"Airport Drainage," a CAA publication which gives information helpful in developing an efficient and economical airport drainage system, is on sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 30 cents a copy.

lines. In comparison, in the fiscal year 1950, our certificated domestic airlines, including our recently created local service carriers, received \$1.44 per mail ton-mile. The domestic trunk airlines, however, which were paid \$2.15 per mail ton-mile in fiscal 1939, received only \$1.17 per mail ton-mile in the fiscal year 1950, a reduction of more than 45 percent."

Improvement in the regularity, dependability, and safety of service, together with improvement in safe operations, the Chairman said, "is almost certain" to improve the economic position of the airlines.

CAA JOURNAL

CAA Finds 'Picture' Instruments Better Than Present Symbolic Type

Aircraft instruments which give a pictorial display enable pilots, both skilled and unskilled, to navigate better than those which give a symbolic display, a research report to the Civil Aeronautics Administration has revealed.

Using an instrument which shows the position of the plane on a "picture" which also shows its destination, 15 private pilots and 15 pilots with instrument ratings flew 407 navigation problems without a single unsuccessful solution. The same pilots, using instruments that gave a symbolic display, flew 439 similar navigation problems, of which 50 were not successfully solved within the time allotted.

Most airplane instruments today are of the symbolic type. That is, they indicate with needles and pointers to the pilot that he is on or off his course or altitude, or that his equipment is operating normally or abnormally. To interpret these indications, he must translate these "signs" into usable knowledge, such as which way to turn to get on the proper course. In the pictorial style instrument, the plane is shown in positive relation to the destination, the range station and the compass course the pilot desires to fly. Little or no interpretation is required, and proper corrective action usually is automatic.

The study is the fourth made in comparing the two kinds of instruments, and results have been uniformly in favor of the "picture" type instrument. The latest study, conducted at the University of Illinois under the auspices of the National Research Council Committee on Aviation Psychology, with funds provided by the CAA, involved problems connected with flying on the very high frequency omni-directional radio range. The pilots "flew" in a Link trainer in which the usual symbolic instruments and a specially made pictorial instrument were installed.

The special instrument showed the omni-station at the center, north at the top and the airplane as a pip which moved about the station. The symbolic display consisted of a deviation meter, a bearing selector, and a TO-FROM meter.

Four problems were given each pilot. In one, with the aircraft already oriented and on course, he was to fly to the station and depart from it on another course. In the second, with his position unknown, the pilot was to orient himself and fly directly to the station. The third was similar to the

second, but a specified course for flying to the station was designated, and in the fourth he was to bypass the station according to the standard procedure for use with the omnirange.

Using the pictorial display, every pilot made every turn correctly the first time. With the symbolic display, turns were slower, frequent unnecessary turns were made and pilots showed no rapid improvement after practice.

Conclusion of the research committee, and also of the CAA's Technical Development and Evaluation Center at Indianapolis where the research report itself was studied, was that the "picture" display has marked superiority over symbolic display.

The study was not concerned with new instruments. The pictorial instrument was made especially for the tests, and in its present form would not be practicable for installation in planes.

The CAA, however, as part of its work for the Air Navigation Development Board, has let three contracts for development of pictorial computers, which will give the pilot a "picture" of aircraft position.

Results of the study are printed in Research Report No. 92, available in limited numbers from the Office of Aviation Information, CAA, Washington 25, D. C.

Arrow Airways Registration Revoked by Action of Board

The Civil Aeronautics Board on January 16 revoked the letter of registration of Arrow Airways, a large irregular air carrier with headquarters in Burbank, Calif. The Board's order set February 15, 1951, as the effective date of the revocation, after which Arrow is ordered to cease and desist from engaging directly or indirectly in air transportation.

Arrow was found by the Board to have conducted a regular air service between Los Angeles and New York and between Burbank and New York, and to have held itself out to the public as conducting a regular service, in violation of section 401(a) of the Civil Aeronautics Act.

Defense Office Established By CAA to Handle Priorities

(Continued from page 13)

units costing \$95,770,000 for delivery in 1951, and 84 aircraft worth \$78,080,000 in 1952. In addition, the CAA has been authorized, within certain limits, to issue "DO" orders to cover needed parts and equipment. The aircraft and spare parts involved are for both scheduled and nonscheduled airlines. The military DO-01 numeral will be used for orders under this program.

Under a different program, the CAA has been authorized by direct NPA delegation to issue DO-45 ratings to obtain necessary equipment for operation and establishment of the Federal Airways system, which is used jointly by military and civil aviation. This also covers the CAA portion of the Air Navigation Development Board program, and some projects of the CAA Technical Development and Evaluation Center at Indianapolis.

Scheduled Airlines Add 700 Aircraft to Fleet During Last Five Years

On January 1, 1951, the scheduled airlines of the United States had in service 1,220 aircraft, 700 more than were in service 5 years ago.

On January 1, 1946, United States air carriers were operating 518 aircraft. The Douglas DC-3 was the standard model accounting for 87 percent of the total, or 453 planes. At that time, there were only 13 Douglas DC-4's in service.

Two years later, on January 1, 1948, air carrier aircraft in scheduled domestic and international service numbered 971. The DC-3 increased from 453 to 513 but the DC-4 advanced even faster, moving from 13 to 264 planes. In addition, this 2-year period found three new models making their appearance—the Douglas DC-6 with 86, the Lockheed Constellation with 62, and the Martin 202 with 9.

In the next 2 years, air carrier aircraft in scheduled service registered another 13 percent increase. There were further gains for the Douglas DC-6, the Lockheed Constellation, and the Martin 202. Two new models were placed in airline service—the Convair 240 and the Boeing Stratocruiser. With the addition of this new equipment, some of the older models began to decline. The DC-3's slipped from 513 to 452; the DC-4 declined from 264 to 233.

In the 12-month period ending January 1, 1951, the scheduled air carrier fleet advanced 11 percent, from 1,096 to 1,220 planes. Principal changes occurred in the Lockheed Constellation and Curtiss C-46. The Constellation total rose from 80 to 106 planes and 46 Curtiss C-46's came into the fleet when the four all-cargo operators were certificated for scheduled service.

The scheduled airlines have not only increased the number of aircraft operated but the fleet of today is composed of aircraft which are considerably faster and larger than those of 5 years ago. An illustration of this trend toward larger models is shown in the data on average available seats per aircraft.

Average Available Seats Per Aircraft

Calendar year	Domestic air carriers	International air carriers
1946.....	25.25	27.21
1948.....	32.37	35.07
1950 (estimate).....	36.17	38.82

Detailed figures showing the number of aircraft in scheduled air carrier service by model for certain recent dates follow:

U. S. Air Carrier Aircraft in Scheduled Service
[as of January 1, 1946, 1948, 1950, 1951]
(Domestic and International Airlines)

Manufacturer and model	1946	1948	1950	1951
Beech A34 Bonanza.....	0	0	0	10
Boeing 247.....	0	4	0	0
307, 314.....	15	5	5	5
377 Stratocruiser.....	0	0	41	45
Convair CV-240.....	0	0	113	119
Curtiss C-46.....	0	0	0	46
Douglas DC-3, DC-3S.....	453	513	452	462
DC-4.....	13	264	233	221
DC-6.....	0	86	110	119
Grumman G21.....	0	0	10	11
Lockheed 10A Electra.....	3	0	6	6
18 Lodestar.....	18	12	11	11
49, 649, 749 Constellation.....	0	62	80	106
Martin 202.....	0	9	24	33
Miscellaneous.....	16	16	11	26
Totals.....	518	971	1,096	1,220

¹ Includes such models as the Stinson SR10, Beech D18, Bell 47 helicopter, and Sikorsky S51 helicopter.

Changes in CAA Positions Announced by Administrator

Changes in several important Civil Aeronautics Administration positions were announced recently by Donald W. Nyrop, Administrator of Civil Aeronautics.

Edward M. Sturhahn has resigned as director, Washington airport project, and Herbert Howell, chief of the Fifth Region airports division, has been detailed from Kansas City to handle his work.

Edgar N. Smith, formerly Deputy Regional Administrator in Atlanta, has transferred to the program planning staff in Washington, filling a vacancy left by Glen Gilbert.

Frank Mashburn, an aeronautical communications specialist of CAA and its predecessor agencies for 23 years, has transferred to the Navy Bureau of Aeronautics as civilian assistant to the chief of the electronics branch.

Mr. Sturhahn, who has been in aviation since 1929, is leaving government service at the advice of his doctor. He will engage in cattle raising on his farm at Purcellville, Va.

Official Actions Civil Aeronautics Board

Regulations

SR-357-----Effective December 15, 1950

Authorized the Administrator to renew until January 31, 1951, any limited flight navigator certificate which expired prior to January 1, 1951, notwithstanding the provisions of paragraph 3 of SR-352; terminated January 31, 1951.

SR-358-----Effective January 1, 1951

Extends to December 31, 1952, date of compliance with identification plate requirements established by amendments 2-1, 3-1, 4a-3, 4b-1, 6-3, 13-1, 14-1, and 15-1 adopted November 2, 1949; supersedes SR-342.

SR-359-----Effective January 9, 1951

Extends for an additional 90-day period the authority of the Administrator to issue limited flight navigator certificates to individuals who meet stated requirements; supersedes SR-352 and SR-357, and terminates March 31, 1951.

SR-360-----Effective January 11, 1951

Permits the Administrator to authorize the installation in newly manufactured aircraft of safety belts which comply with the provisions of the Civil Air Regulations effective prior to January 1, 1951, under specified conditions; terminates December 31, 1951.

ER-158-----Effective December 31, 1950

Amendment No. 2 to part 292 strikes the date "December 31, 1950" from section 292.3 (d) regarding operations of Alaskan pilot-owners and substitutes in lieu thereof the date "December 31, 1951."

PR-9-----Effective December 27, 1950

Amends part 302 of the procedural regulations to define more specifically the obligations of participants in an informal mail rate conference.

Amdt. 4b-2-----Effective January 17, 1951

Amends part 4b by prescribing specific arrangements for the basic flight instruments and for certain controls and control knob shapes so as to standardize cockpits of civil aircraft.

Amdt. 24-3-----Effective December 28, 1950

Rescinds § 24.45 of part 24 respecting annual experience reports.

Amdt. 26-2-----Effective December 28, 1950

Rescinds § 26.37 of part 26 respecting annual experience reports.

Amdt. 27-2-----Effective December 28, 1950

Rescinds § 27.15 of part 27 respecting annual experience reports.

Amdt. 51-1-----Effective December 28, 1950

Rescinds § 51.6 of part 51 respecting annual experience reports.

Amdt. 4b-3-----Effective February 12, 1951

Amends part 4b with respect to humidity accountability.

Safety Orders

S-394 grants Delta Air Lines waiver of § 40.21 (b) of the Civil Air Regulations for 3 months from date of order (November 6).

S-395 stays initial decision of examiner and reopens the record for the taking of further evidence and hearing on January 15, 1951, in the matter of John Gordon Bennett (December 15).

S-396 denies appeal of Harlin E. Bell and affirms the examiner's order except that the period of suspension of respondent's airman certificate shall commence on January 7, 1951, and continue in effect for an aggregate of 6 months (December 28).

Airline Orders

E-4848 grants A. Paul Mants, d.b.a. Paul Mants Air Services, temporary exemption so as to permit Mants to engage in interstate air transportation of persons and property (November 20).

E-4849 grants certain cities and chambers of commerce leave to intervene in the matter of the application of Delta Air Lines for amendment of its certificate so as to extend routes Nos. 24 and 54 beyond Columbia, S. C., to the terminal points New York, N. Y., Newark, N. J., via stated intermediate points; otherwise dismisses petitions (November 20).

E-4850 approves agreements embodied in resolutions of traffic conferences Nos. 1, 2, and 3 of IATA adopted at meetings held in Madrid, Spain, in May 1950, relating to traffic matters (November 20).

E-4851 grants city of Bemidji and the city of St. Cloud, Minn., and the city of Oshkosh, Wis., leave to intervene in the *Wisconsin Central Certificate Renewal* case (November 20).

E-4852 dismisses application of Coastal Tank Lines under section 401 of the Act (November 20).

E-4853 opinion and order deny applications of the city of Lumberton, N. C., seeking amendment of certain existing certificates of Eastern Air Lines and Piedmont Aviation so as to provide Lumberton with air service (November 20).

E-4854 dismisses application of Pan American World Airways and petition of Trans World Airlines for leave to intervene in the matter of Pan American's application for temporary amendment of its certificate so as to authorize operations to Paris, France, and Rome, Italy (November 21).

E-4855 denies Argonaut Airways Corp. exemption which would permit it to engage in certain air transportation as authorized by part 291; terminates temporary exemption; denies request of various air carriers (November 21).

E-4856 directs Helicopter Air Service to show cause why its petition for amendment of order serial No. E-3729 so as to increase the temporary mail rates over its entire system should not be

denied, and the rates fixed pursuant thereto continued (November 21).

E-4857 authorizes Central Airlines to change its service pattern so as to omit service to Woodward, Okla., on segment 1, and to Gainesville, Tex., on segment 4 of route No. 81, during hours of darkness for 30 days, or until airport facilities are adequate; otherwise denies (November 21).

E-4858 opinion and order issue foreign air carrier permits to Aerovias "Q", S. A., Compania Cubana de Aviacion, S. A., and Servicios Aereos, S. A.; proceeding reopened to permit Express Aereo Inter-Americano, S. A., to introduce further evidence; deny in all other respects in the *Cuba-Florida Air Carrier Permit* case. Approved by the President November 20 (October 3).

E-4859 grants stated petitioners leave to intervene in the *Indiana-Ohio Local Service* case (November 21).

E-4860 disapproves agreements embodied in resolutions or parts of resolutions of the joint meetings of IATA traffic conferences Nos. 1, 2, and 3 at a meeting held at Madrid, Spain, in May 1950, relating to rates (November 24).

E-4861 terminates investigation concerning the activities and practices of large irregular carriers instituted by order serial No. E-1864 (November 22).

E-4862 authorizes Robinson Airlines Corp. to suspend service at Middletown, N. Y., until October 1, 1951, or until such time as adequate airport facilities are available for scheduled operations (November 22).

E-4863 rescinds order serial No. E-1097; dismisses petition of American Airlines, and terminates the proceeding in the matter of the applications of TWA, American, and United for amendment of certificates (November 24).

E-4864 grants All American Airways extension of its authority to suspend service at Indiana and Stroudsburg-East Stroudsburg, Pa., on its route No. 97 until November 24, 1951, or until adequate airport facilities are available for scheduled operations; temporarily exempts All American from another condition in its certificate; otherwise denies (November 24).

E-4865 institutes investigation of revisions of tariff proposed by Slick Airways, the Flying Tiger Line, and United Air Lines concerning reductions in eastbound rates on certain named commodities, including piece goods, woolen, in rolls, and clothing in cartons; defers use until February 22, 1951 (November 24).

E-4866 amends the Board's order serial No. E-3127, in the matter of the application of Roscoe Turner Aeronautical Corp. for permission to transfer its certificate for route No. 88 to Turner Airlines, to read: "not later than 30 days after a decision in the proceeding in docket No. 4034" (November 24).

E-4867 reissues certificate issued in order serial No. E-3127 to Turner Airlines for route No. 88, so as to reflect the change in corporate name to Lake Central Airlines (November 24).

E-4868 denies motion of Modern Air Transport for stay of proceedings in the matter of the application for an exemption filed pursuant to section 291 of the Board's economic regulations and section 416 (b) of the Act (November 24).

E-4869 denies Totem Air Service exemption which would permit it to engage in certain air transportation as authorized by part 291; terminates temporary exemption; otherwise denies requests of various air carriers (November 24).

E-4870 opinion and order fix and determine a final mail rate of \$3,580.526 for Western Air Lines over stated portions of its route for the period from May 1, 1944, to December 31, 1948, inclusive, and for Inland Air Lines of \$1,022.793 over its entire system from March 28, 1947, to December 31, 1948, inclusive; order for each carrier stayed 10 days from date of service to permit filing of exceptions (November 24).

E-4871 orders American Shippers to cease and desist from conducting certain operations in air transportation of property (November 27).

E-4872 orders Metropolitan Air Freight Depot to cease and desist from conducting certain operations in air transportation of property (November 27).

E-4873 revokes without prejudice letter of registration No. 117 held by Video Distribution (November 27).

E-4874 amends Board's order serial No. E-4826 in the matter of mail pay to Florida Airways over its entire system (November 27).

E-4875 reopens record for the specific purpose only of receipt into the record of an agreement filed by Byers Airways providing for the transfer to it of the assets and certificate of Lon Brennan Air Service (November 27).

E-4876 opinion and order direct Piedmont Aviation and Capital Airlines to show cause why the Board should not amend their certificates for routes Nos. 87 and 51, respectively (November 27).

E-4877 grants the Phoenix, Ariz., Chamber of Commerce and the city of Colton, Calif., leave to intervene in the *Reopened Additional California-Nevada Service* case (November 27).

E-4878 authorizes TWA to suspend service at Washington, D. C., as a coterminal point on its foreign air route until November 30, 1951 (November 27).

E-4879 authorizes Ozark Airlines to suspend service for 6 months, or until adequate airport facilities are provided, at Jefferson City, Mo., on segment 6, and at Chanute and Emporia, Kans., on segment 7 of its route No. 107 (November 27).

E-4880 authorizes Northwest Airlines to suspend service to Portland, Oreg., on route No. 95 until June 30, 1951, or until the Portland Airport is adequate for substantially unrestricted use with Boeing-377 aircraft (November 27).

E-4881 severs from docket No. 4668 and assigns docket No. 4763 to that portion of the application of Mid-Continent Airlines relating to nonstop service between Kansas City and Houston, and consolidates it with the matter of Mid-Continent's application for an amendment of its certificate for route No. 80; otherwise denies (November 28).

E-4882 dismisses complaint of American Airlines with respect to a proposed amendment of rule 20 on behalf of Slick Airways (November 28).

E-4883 opinion and order in the *Service to Toronto* case issue an amended certificate to American Airlines for its route No. 56. Approved by the President November 28, 1950 (August 31).

E-4884 grants Air Line Stewards and Stewardess Association, International, leave to intervene in the *Southwest-West Coast Merger* case (November 28).

E-4885 amends "approved service plan—foreign air transporta-

tion" of Pan American World Airways, issued September 22, 1950, order serial No. E-4635, so as to delete certain language from paragraph 1 (November 28).

E-4886 denies United Air Lines exemption which would permit it to engage in certain air transportation to and from Rockford, Ill., Dubuque, Iowa, and Waterloo, Iowa, on its route No. 1 (November 29).

E-4887 dismisses complaint of Delta Air Lines with respect to extension and retention by Chicago and Southern Air Lines of its 30-day, round-trip excursion fares between Chicago, Ill., and Havana, Cuba (November 29).

E-4888 dismisses the proceeding of suspension and investigation instituted by order serial No. E-4580 in the matter of fares proposed by Delta Air Lines, Eastern Air Lines, and Southern Airways (November 29).

E-4889 amends order serial No. E-3942 to include the Troy Union Railroad Co. in the matter of approval of certain interlocking relationships (November 29).

E-4890 modifies order serial No. E-4048 in the *Air Freight Rate* case to permit stated below minimum directional rates to be established and maintained until September 1, 1951, for shipment of field grown gladioli (November 30).

E-4891 amends order serial No. E-4636 in the matter of a change in the "approved service plan—foreign air transportation" of Trans World Airlines (November 30).

E-4892 amends order serial No. E-4885 in the matter of a change in the "approved service plan—foreign air transportation" of Pan American World Airways (November 30).

E-4893 dismisses the proceeding of suspension and investigation instituted by order serial No. E-4706 in the matter of rates proposed by the Flying Tiger Line and Slick Airways (November 30).

E-4894 dismisses application of American Central Air in the *Latin American Air Freight* case (November 30).

E-4895 dismisses application of American Air Cargo in the *Latin American Air Freight* case (November 30).

E-4896 dismisses application of Norfolk-Cape Charles Airlines for a certificate (November 30).

E-4897 dismisses application of Automobile Air Freight Corp. for a certificate and the petitions of the city of Detroit, Mich., the Detroit Board of Commerce, and the Department of Justice for leave to intervene (November 30).

E-4898 dismisses application of Lyon Van & Storage Co. for a certificate (November 30).

E-4899 dismisses application of Brown and Harris Aviation for a certificate (November 30).

E-4900 grants the Upper Peninsula Development Bureau (Michigan), the city of Brainerd, Minn., and the State of Wisconsin leave to intervene in the *Wisconsin Central Certificate Renewal* case (November 30).

E-4901 authorizes Wisconsin Central Airlines to suspend service at Racine-Kenosha, Wis., on route No. 86, until October 21, 1951, or until airport facilities are adequate for regularly scheduled service (November 30).

E-4902 orders Central Airlines to show cause why the Board should not fix certain temporary mail rates over its entire system (December 1).

E-4903 orders Mid-West Airlines (formerly Iowa Airplane Co.) to show cause why the Board should not fix certain temporary mail rates over its entire system (December 1).

E-4904 grants Northern Consolidated Airlines a 6-month exemption under section 416 (b) of the Act, so as to permit it to engage in interstate air transportation of persons and property within the Territory of Alaska, pursuant to contracts between it and any Department of the Military Establishment, or request of any Department in connection with its contracts with other persons (December 1).

E-4905 opinion and order disapprove interlocking relationships arising from the holding by Price Campbell of directorships in Pioneer Air Lines and the Wichita Valley Railway Co. (December 1).

E-4906 grants Hawaiian Airlines exemption so as to permit it to engage in air transportation between stated points in the Territory of Hawaii (December 4).

E-4907 grants Robert L. Hall, d. b. a. Bob Hall's Air Service, exemption from the provisions of section 291 so as to permit Hall to utilize the services of an employed pilot in the conduct of air transportation as an Alaska pilot-owner, effective December 1, 1950, to January 15, 1951, subject to stated conditions (December 1).

E-4908 denies Kesterson, Inc., exemption which would permit it to engage in certain air transportation as authorized by part 291; terminates temporary exemption (December 4).

E-4909 suspends letters of registration of certain noncertificated irregular air carriers (December 4).

E-4910 grants United exemption for 6 months from the provisions of section 403 (b) of the Act, so as to permit it to furnish free interstate transportation to technical employees of Eclipse Pioneer on regularly scheduled flights to make technical in-flight observation of such aircraft and parts (December 6).

E-4911 dismisses complaint of United in the matter of a certain rule modification proposed by Capital Airlines (December 7).

E-4912 dismisses application of Northwest for an exemption pursuant to section 416 (b) of the Act (December 7).

E-4913 grants certain petitioners leave to intervene in the *Wisconsin Central Certificate Renewal* case (December 7).

E-4914 grants certain petitioners leave to intervene in the *North Central Route Investigation* case (December 7).

E-4915 dismisses proceeding of suspension and investigation instituted by order serial No. E-4108 in the matter of round trip excursion fare, rules, and regulations proposed by Eastern (December 7).

E-4916 grants certain petitioners leave to intervene in the *Indiana-Ohio Local Service* case (December 7).

E-4917 amends order serial No. E-4865, which instituted an investigation and suspension proceeding involving east bound rates on certain named commodities proposed on behalf of Slick Airways, the Flying Tiger Line, and United Air Lines (December 8).

E-4918 grants Remmert-Werner temporary exemption from the provisions of section 401 (a), 404 (a), and 405 (e), subject to stated terms, conditions, and limitations, so as to permit it to

(Continued on page 18)

Accident Reports . . . Civil Aeronautics Board

Plane Struck Flagpole.—An attempt to complete a landing approach by visual means during which time visual reference to the ground was lost was given by the Board as the probable cause of an accident near Twin Cities Airport at Minneapolis March 7, 1950, in which 10 passengers and a crew of 3 were killed when a Northwest Airlines plane struck a flagpole and crashed.

The flight originated at Washington, D. C., destined for Winnipeg. When the flight requested clearance to land at Twin Cities Airport, the tower advised that weather conditions were: precipitation ceiling, 900 feet; visibility ½ mile variable, reduced by blowing snow.

The flight was not seen from the tower during its approach but was heard to pass overhead. After the aircraft had flown over the field, it was observed flying straight and level 3.8 miles northwest of the airport. A wing was seen to fall. Then the aircraft was seen to dive almost vertically and crash into a residence in the city of Minneapolis. Fire broke out almost immediately. Two of the occupants of the house were killed.

Investigation disclosed that the left wing of the aircraft had struck a steel flagpole near the entrance of the National Soldiers Cemetery.

"It is clear that no aircraft engine failure was involved in this accident," the Board said, "since none was indicated by the investigation, and since the aircraft flew 6 miles after striking the flagpole. It is also indicated that the pilot was not using ILS throughout his landing approach, because when he struck the flagpole he was 128 feet below the glide path and 650 feet to the left of the center line of the localizer. Such a position of the aircraft would have resulted in a full scale deflection of the indicators for both the glide path and the localizer."

The Board added that it "would be entirely unreasonable to conclude" that a pilot as expert as the captain in command "would have permitted the aircraft to be flown beyond the recording limits of both the glide path and the localizer if he had been making an ILS approach."

"Had the pilot made an ILS approach, maloperation of the ILS transmitters could not have caused him to fly so far below the glide path and to the left of the localizer course." The Board pointed out that the equipment would have been turned off automatically by the mechanical monitoring devices if the instrument flight path had been transmitted outside of accepted limits, and at the time of the accident the equipment was in full operation.

"In addition to the above," the Board continued, "there is the fact that other pilots were able to complete their landing approaches during the period of the accident by visual reference to the ground, since slant visibility was relatively good."

"Accordingly, it appears reasonable to conclude that the pilot of Flight 307 attempted to complete his landing approach visually, and did not use the ILS. Since the flight struck a flagpole which was clearly marked by red neon obstruction lights, it is also reasonable to conclude that visibility was restricted by blowing snow."

Turn Ends in Crash.—Failure of a pilot properly to clear his position before starting a steep left turn was given by the Board as the probable cause of a collision near Sharon Springs, Kans., April 30, 1950, in which the occupants of both aircraft, the pilots and a passenger, were killed.

The pilots were Roland O. Scott and Wilmer L. Rivers. They were enrolled in a veteran's flight training program. Scott, a student pilot, had been instructed to practice "S" turns at 500 feet in the local practice area. Rivers, a private pilot, had received no specific instructions before flight, and the

Board said it was not known whether he was accomplishing a part of the training program or flying simply for pleasure.

Shortly before the accident, witnesses observed Rivers performing a series of steep dives and climbs at a low altitude, after which he flew straight and level for a brief time toward the east. During the same period Scott practiced "S" turns at an altitude of 500 feet, progressing slowly to the east. Immediately before the collision both aircraft were observed flying an easterly heading. Rivers seemed to be slightly below, ahead, and to the right of Scott. Then, both aircraft turned left, but Rivers' turn was considerably steeper than Scott's. As a result the aircraft collided.

"The cause of this accident lies in the fact that Rivers did not carefully look for other airplane before he executed his steep left turn," the Board said.

Control of Aircraft Lost.—Loss of control of the aircraft during an instrument approach under conditions of heavy icing and severe turbulence was given by the CAB as the probable cause of an accident near Cheyenne, Wyo., October 9, 1949, when a Slick Airways' plane was demolished. The three occupants were killed.

The plane was on a scheduled cargo flight from San Francisco to Newark, with stops scheduled at Las Vegas and Denver. Three hours out of Las Vegas, the flight was informed that the Denver weather was below the company's landing minimums. The crew asked and was granted permission to land at Laramie, but 25 miles south of Laramie, permission was requested to proceed direct to Cheyenne. Approval was granted and the crew was informed that there was a squall line between Laramie and Cheyenne.

The front moved toward Cheyenne more rapidly than was anticipated and reached Cheyenne before the flight could land, the Board said. During the descent at Cheyenne, the flight encountered severe turbulence and heavy icing.

The plane crashed 2½ miles south of the Cheyenne airport on rolling terrain.

CAM Supplements and Aviation Safety Releases

(Issued between December 15, 1950, and January 15, 1951, and obtainable from the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.)

CAM Supplements

CAM No.	Supplement No.	Date	Title
3	7	12/21/50	Water Loads—Alternate Standards.
4b	5	12/18/50	Portable Water Solution Type Fire Extinguisher.
	6	12/21/50	Water Loads—Alternate Standards.
35	7	12/22/50	Protective Breathing Equipment.
	2	1/ 2/51	Study Guides for Flight Engineer Written and Practical Examinations.
40	4	12/29/50	Ceiling and Visibility Minimums.
41	11	12/22/50	Protective Breathing Equipment for the Flight Crew.
	12	12/29/50	Ceiling and Visibility Minimums.
61	8	12/22/50	Protective Breathing Equipment and Installation.

Aviation Safety Releases

No.	Date	Subject
339	12/21/50	ANC-3 Water Loads Bulletin, dated June 1950.

Civil Aviation Highlights

	1950	1949
Airports, airfields recorded with CAA, December 31		
By Type: ¹		
Commercial.....	2,329	2,585
Municipal.....	2,272	2,200
CAA Intermediate.....	76	139
Military.....	331	353
All others.....	1,395	1,207
a. Private use.....	1,244	1,074
b. Miscellaneous government.....	151	133
Civil airports and airfields by class: ²		
Total.....	6,072	6,181
Class I and under.....	4,005	4,054
Class II.....	964	994
Class III.....	507	501
Class IV.....	376	368
Class V.....	139	135
Class VI and over.....	81	79
Total U. S. civil aircraft, December 31.....	92,806	92,622
Scheduled air carrier aircraft, December 31.....	1,220	1,096
Civil aircraft production, November		
Total.....	227	158
1- and 2-place models.....	64	37
3-, 4-, and 5-place models.....	151	106
Over 5-place models.....	12	15
Certificates approved, November		
Student pilots.....	2,980	4,064
Private pilots.....	1,789	2,322
Commercial pilots.....	339	477
Airline transport pilots.....	71	109
Mechanics (original certificates).....	406	520
Ground instructors (original certificates).....	59	84
Flight instructor ratings.....	114	166
Instrument ratings.....	89	99
Control tower operators.....	55	105
Traffic control activity, November		
Aircraft operations, CAA airport towers.....	1,140,638	1,221,703
Fix postings, CAA airport centers.....	941,499	760,314
Instrument approaches, CAA approach control towers.....	21,784	15,731
AIRPORT OPERATIONS		
Washington National, December		
Scheduled air carrier:		
Passengers departing.....	81,505	47,901
Passengers arriving.....	76,395	43,809
Aircraft arrivals and departures.....	10,394	8,845
Other aircraft arrivals and departures.....	2,708	2,085
San Francisco Municipal, November		
Scheduled air carrier:		
Passengers departing.....	47,514	41,429
Passengers arriving.....	47,604	40,761
Aircraft arrivals and departures.....	6,883	6,702
Other aircraft arrivals and departures.....	2,637	3,475
Oakland Municipal, November		
Scheduled air carrier:		
Passengers departing.....	8,191	3,112
Passengers arriving.....	8,376	3,240
Aircraft arrivals and departures.....	4,648	4,101
Other aircraft arrivals and departures.....	6,843	10,940
Miami International, November		
Scheduled air carrier:		
Passengers departing.....	44,752	32,023
Passengers arriving.....	47,405	34,280
Aircraft arrivals and departures.....	8,462	7,263
Other aircraft arrivals and departures.....	7,975	8,345
Los Angeles International, November		
Scheduled air carrier:		
Passengers departing.....	53,248	40,823
Passengers arriving.....	54,045	43,314
Aircraft arrivals and departures.....	7,564	7,812
Other aircraft arrivals and departures.....	5,388	4,865

¹ Airport type definitions: Commercial—Public use and public services, privately owned and operated. Municipal—Public use and public services, municipally owned and/or operated. CAA Intermediate—Public emergency use, no services, CAA operated. Military—Public restricted, military operated. All others—(a) Public emergency use only; no public services, privately owned for personal use; (b) Public emergency use only, no public services, Government-owned Forest Service, etc.

² The following is a break-down of paved airports and unpaved airfields by class of facility:

Class of facility	Paved airport	Unpaved airfields	Totals
I and under.....	108	3,897	4,005
II.....	158	806	964
III.....	332	175	507
IV.....	336	40	376
V.....	131	8	139
VI and over.....	78	3	81
Totals.....	1,148	4,929	6,072

CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board.

Administration

CAA Finds "Picture" Instruments Better for Pilots Than "Symbolic"—(January 7, 1951).

CAA Study Shows How to Improve Plane Radio—(January 16, 1951).

Like Moose Meat? Gold Dust? Want a CAA Job in Alaska?—(January 21, 1951).

CAA Publishes Manual on Inspection for Plane Owners—(January 22, 1951).

New CAA Office to Meet Civil Air Priority Needs—(January 23, 1951).

CAA Prepares Target for Checking Tower Light Guns—(January 25, 1951).

CAA Puts New Flight Plan Form Into Use in February—(January 29, 1951).

Address by Donald W. Nyrop, Administrator of Civil Aeronautics, at Aero Club of Washington, D. C. (January 23). "The Role of CAA in Maintaining the Operation of Our Civil Air Fleet."

Board

Meteor Air Transport, Inc., Ordered by Board to Cease Violations of Civil Aeronautics Act—(CAB 51-1) (January 5).

Board Names Gordon M. Bain Director of New Bureau of Air Operations—(CAB 51-2) (January 8).

New Personnel Assignments Announced—(CAB 51-3) (January 15).

CAB Revokes Arrow Airways Letter of Registration—(CAB 51-4) (January 16).

CAB Sets Hearing for Monarch Air Transport Accident at Chicago, Ill.—(CAB 51-5) (January 17).

CAB Sets Hearing for National Airlines Accident at Philadelphia, Pa.—(CAB 51-6) (January 25).

Nyrop Outlines Steps Taken To Assist Civil Aviation

(Continued from page 13)

The NPA has recognized the importance of the civil-military all-weather airways program, Mr. Nyrop added, and has given CAA authority to issue "DO" ratings covering not only maintenance of existing Federal airways, but also establishment of new facilities as agreed upon in the RTCA SC-31 program.

An airports division will be set up in the Office of Aviation Defense Requirements, the Administrator said. "We expect to make provision for essential construction and maintenance of airports," he added. Airport owners, operators, or contractors will submit their requirements to the CAA airport district offices.

Prototype Committee Meets—Steps taken to develop improved transport-aircraft were reviewed by Mr. Nyrop. "Our present thinking encompasses not merely providing the bare essentials to maintain present levels of development in civil aviation, but to allow for progress," the Administrator said. "If we are to meet the challenge that faces us in the world today, we must find new and better ways of doing things, so that we can be both strong and prosperous."

"With this in mind, I believe it is quite in keeping with our national objectives to proceed as rapidly as possible with the testing and development of advanced prototype aircraft, under the authority given to CAA in Public Law 867. We held the first meeting of our Prototype Aircraft Advisory Committee on Friday, and the interchange of ideas between the

Scheduled Air Carrier Operations

[Source: CAB Form 41]

Domestic: November 1950

Operator	Revenue miles	Revenue passengers	Revenue passenger miles (000)	Passenger seat miles (000)	Revenue passenger load factor (percent)	Ton-miles flown		
						Express	Freight	United States mail
Trunk Lines								
American Airlines.....	5,046,629	307,434	149,141	215,812	69.11	849,125	3,345,166	961,259
Brantiff Airways.....	925,352	54,996	18,089	32,399	55.83	112,179	186,681	106,934
Capital Airlines.....	1,780,302	112,388	34,049	65,806	51.74	217,829	687,741	121,279
Chicago & Southern Air Lines.....	623,052	30,337	10,542	17,865	59.01	77,024	69,194	52,866
Colonial Airlines.....	282,812	14,974	3,770	8,232	45.80	8,537	9,269	7,862
Continental Air Lines.....	503,765	16,933	5,903	14,254	41.41	8,471	44,472	16,967
Delta Air Lines.....	1,138,147	54,817	22,446	37,896	59.23	103,704	325,881	109,403
Eastern Air Lines.....	3,973,890	231,443	96,721	158,644	60.97	441,704	535,881	456,019
Inland Air Lines.....	228,645	6,808	2,570	5,550	46.31	6,474	14,755	13,072
Mid-Continent Airlines.....	626,446	28,220	8,289	15,900	52.13	17,199	42,180	26,780
National Airlines.....	889,190	33,185	19,378	34,679	55.88	26,826	344,397	55,051
Northeast Airlines.....	394,506	29,022	5,451	10,594	51.45	19,608	22,602	10,199
Northwest Airlines.....	1,175,588	44,958	29,639	61,695	48.04	185,347	638,472	193,342
Trans World Airlines.....	3,749,358	128,650	88,248	145,097	60.82	658,946	1,466,116	818,201
United Air Lines.....	4,155,030	191,167	110,780	163,387	67.80	974,368	2,387,079	1,086,427
Western Air Lines.....	649,288	41,313	15,140	25,811	58.66	38,703	52,152	75,889
Trunk total.....	26,082,000	1,326,635	620,156	1,013,621	61.18	3,746,044	10,172,038	4,111,550
Feeder Lines								
All American Airways.....	226,131	10,713	1,503	4,749	31.65	11,544	0	3,104
Bonanza Air Lines.....	74,102	1,705	414	1,541	26.87	146	654	400
Central Airlines.....	155,641	1,105	162	1,148	14.11	0	0	1,320
Empire Air Lines.....	103,910	3,556	660	2,182	30.25	1,666	0	1,965
Frontier Airlines (Challenger-Monarch merger eff. 6/1/50).....	357,016	5,715	1,433	7,140	20.07	4,584	12,048	7,810
Helicopter Air Service.....	26,923	0	0	0	—	0	0	1,585
Lake Central Airlines (formerly Turner).....	97,827	1,527	246	1,670	14.73	7,995	0	632
Los Angeles Airways.....	22,707	0	0	0	—	0	0	2,872
Mid-Continent Airlines.....	64,987	2,471	528	1,365	38.68	2,206	4,699	1,159
Mid-West Airlines.....	137,730	551	71	551	12.89	0	0	1,169
Piedmont Aviation.....	288,019	10,723	2,306	6,048	38.13	7,636	10,734	3,935
Pioneer Air Lines.....	297,701	11,250	2,957	7,145	41.39	4,113	12,744	7,852
Robinson Airlines.....	108,613	5,213	866	2,170	39.91	4,192	3,114	1,663
Southern Airways.....	188,959	4,789	874	3,971	22.01	4,284	0	5,407
Southwest Airways.....	181,657	9,349	1,814	3,815	47.55	3,649	9,158	3,192
Trans-Texas Airways.....	262,752	6,686	1,464	5,518	26.53	3,138	6,205	4,320
West Coast Airlines.....	84,926	3,959	556	1,783	31.18	589	2,865	458
Wiggins, E. W., Airways.....	49,259	265	24	197	12.18	0	0	129
Wisconsin-Central Airlines.....	172,459	4,272	648	1,410	45.96	4,473	0	3,944
Feeder total.....	2,901,319	83,849	16,526	52,403	31.54	60,215	62,221	52,916
Territorial Lines								
Caribbean-Atlantic Airlines.....	40,913	4,718	381	1,064	35.81	0	1,871	742
Hawaiian Airlines.....	222,030	21,572	2,763	4,836	57.13	9,223	41,746	3,258
Territorial total.....	262,943	26,290	3,144	5,900	52.78	9,223	43,617	4,000
Grand Total.....	29,246,262	1,436,774	639,826	1,071,924	59.69	3,815,482	10,277,876	4,168,466

very diverse industry and Government groups represented was a valuable first step toward establishing a clear-cut program of action.

"There is pretty general agreement that development of turbine-powered cargo aircraft is of prime importance," the Administrator continued. "Although decisions as to size will not be made until after further study, discussion centered around a 50,000-pound payload type, and another to be in the 20,000-to-30,000-pound payload range."

"Considerable interest was expressed in feeder line planes, and a technical subcommittee was instructed to investigate the entire short-haul picture, so that an area of action could be agreed upon."

"At the same time, the committee stressed the importance of getting simulated operating experience with such advanced aircraft as are already available or under development. This will involve looking into the possibility of service testing the B-45 jet bomber, turbo-prop versions of existing aircraft, and any other advanced types found available."

The Administrator said the committee expressed "the definite feeling" that the prototype program merits priorities for materials and manpower. "Recalling that the British began their work on jet transports in the dark days of 1942, I feel we can afford to devote our efforts to this program, within the modest limits set by the authorizing legislation of \$12,500,000 for a 5-year period."

CAB Official Actions

(Continued from page 16)

engage in interstate air transportation of persons and property; terminates temporary exemption granted by section 291; otherwise denies (December 8).

E-4919 denies petition of Air Transport Associates in the matter of a special fare for travel on cargo aircraft from Fairbanks, Alaska, to Seattle, Wash. (December 8).

E-4920 severs from docket No. 4455 and assigns docket No. 4782 to that portion of the application of Central Airlines requesting authority to provide service between certain points in Kansas and Nebraska; consolidates dockets Nos. 3758, 4614, 4617, 4648, 4630, and 4782 into a single proceeding to be known as the *Additional Service to Kansas* case; grants the Postmaster General and the State of Nebraska Department of Aeronautics leave to intervene (December 11).

E-4921 denies the city of Seymour and the Seymour Indiana Chamber of Commerce and the Vermillion County Airport Authority of Danville, Ill., leave to intervene in the *Indiana-Ohio Local Service* case (December 11).

E-4922 authorizes Lake Central Airlines to suspend service temporarily at Logansport, Ind. (December 11).

E-4923 authorizes the examiner to issue a report recommending a decision in the matter of fares, rules, and regulations proposed by Eastern Air Lines, National Airlines, and Pan American World Airways (December 12).

E-4924 grants the city and Chamber of Commerce of Glade-water, Tex., leave to intervene in the matter of the application of Delta Air Lines for an amendment of its certificate; dismisses the petition in docket No. 4584 (December 12).

E-4925 orders TWA to show cause why the Board should not fix certain temporary mail rates in its trans-Atlantic operations (December 12).

E-4926 orders Pan American World Airways to show cause why the Board should not fix certain temporary mail rates in its trans-Atlantic operations (December 12).

(Continued on page 21)

Scheduled Air Carrier Operations

(Continued on page 20)

International and Overseas: January–November 1950, 1949

Operator	Revenue miles January–November		Revenue passengers January–November		Revenue passenger miles (000) January–November		Passenger seat miles (000) January–November		Revenue passenger load factor (percent) January–November	
	1950	1949	1950	1949	1950	1949	1950	1949	1950	1949
American Airlines	2,082,333	2,026,837	81,880	75,946	62,431	60,084	102,673	96,357	60.81	62.36
American Overseas Airlines (ceased opr. 9/25/50)	4,808,058	7,130,766	105,823	87,040	160,108	169,019	242,038	278,907	66.15	60.60
Braniff Airways	2,360,542	1,503,879	18,589	11,974	38,930	25,993	101,512	69,351	38.35	37.48
Chicago & Southern Air Lines	1,742,190	1,631,681	20,235	20,996	24,778	24,655	69,234	75,936	35.79	32.47
Colonial Airlines	553,258	633,842	21,276	12,072	17,265	9,496	27,478	27,866	62.83	34.08
Eastern Air Lines	685,777	688,480	15,179	13,387	15,785	14,349	35,301	34,329	44.72	41.80
National Airlines	697,244	589,658	73,613	53,534	19,885	15,262	38,690	29,091	51.40	52.46
Northwest Airlines	5,660,986	5,328,247	49,279	34,748	92,828	69,238	166,481	125,204	55.76	55.30
Pan American World Airways:										
Atlantic Division	11,740,509	14,505,488	169,437	121,206	329,139	295,636	460,519	486,070	71.47	60.82
Latin American Division	24,981,165	26,595,673	638,803	649,857	553,333	538,789	902,157	969,600	61.33	55.57
Alaska Operations	2,221,705	2,283,057	40,144	35,225	38,044	34,379	68,988	67,049	55.15	51.27
Pacific Operations	8,582,550	13,145,720	67,814	78,456	205,783	224,866	371,719	364,593	55.36	61.68
Pan American-Grace Airways	5,231,635	5,264,947	90,881	84,612	94,387	96,042	198,148	182,619	47.63	52.59
Trans World Airlines (5/17/50)	12,783,989	12,693,424	115,804	94,655	314,025	266,546	510,267	426,696	61.54	62.47
United Air Lines	1,928,917	2,197,064	25,933	25,552	62,488	60,889	99,879	93,843	62.56	64.88
Uruba, Medellin & Central Airways	93,016	93,308	2,387	2,568	785	853	1,589	1,487	49.40	57.36
Total	86,153,874	96,312,071	1,537,077	1,401,828	2,029,994	1,906,096	3,396,673	3,328,998	59.76	57.26
Index (1949=100)	89.45	100.00	109.65	100.00	106.50	100.00	102.03	100.00	104.37	100.00

Operator	Ton-miles flown							
	Express January–November		Freight January–November		United States mail January–November		Parcel post January–November	
	1950	1949	1950	1949	1950	1949	1950	1949
American Airlines	11,484	1,529	1,240,720	1,089,694	112,236	115,444	0	0
American Overseas Airlines (ceased opr. 9/25/50)	2,058,699	3,274,411	0	0	1,076,291	1,026,132	285,567	310,128
Braniff Airways	0	0	843,877	207,301	51,364	16,587	0	0
Chicago & Southern Air Lines	0	0	603,763	281,787	25,878	12,793	2,008	1,332
Colonial Airlines	0	0	52,101	47,608	4,181	7,453	973	1,229
Eastern Air Lines	0	0	281,262	379,855	70,786	55,720	5,249	6,079
National Airlines	125,856	249,414	119,661	0	12,156	12,206	0	0
Northwest Airlines	157,160	94,522	5,546,691	4,121,664	1,864,627	1,728,272	0	0
Pan American World Airways:								
Atlantic Division	7,537,094	7,739,840	0	0	2,545,377	2,090,491	601,518	385,326
Latin American Division	19,735,823	16,795,358	0	0	2,506,468	2,388,819	0	17,556
Alaska Operations	3,798,325	3,779,459	0	0	356,419	383,860	0	0
Pacific Operations	5,274,470	5,508,473	0	0	5,243,450	5,122,048	0	0
Pan American-Grace Airways	1,537,924	1,676,381	0	0	304,079	282,103	31,581	21,884
Trans World Airlines (5/17/50)	0	5,527,864	5,445,571	0	2,444,649	2,192,946	416,199	415,747
United Air Lines	0	279,994	337,218	0	545,924	637,253	0	0
Uruba, Medellin & Central Airways	30,569	33,998	0	0	0	0	0	0
Total	40,267,404	44,961,243	14,470,864	6,127,909	17,163,885	16,072,127	1,343,085	1,159,281
Index (1949=100)	89.56	100.00	236.15	100.00	106.79	100.00	115.85	100.00

International and Overseas: November 1950

Operator	Revenue miles	Revenue passengers	Revenue passenger miles (000)	Passenger seat miles (000)	Revenue passenger load factor (percent)	Ton-miles flown			
						Express	Freight	United States mail	Parcel post
American Airlines	176,680	6,721	4,925	8,837	55.73	1,037	118,963	10,957	0
Braniff Airways	257,160	1,963	4,206	11,756	35.78	0	91,579	6,889	0
Chicago & Southern Air Lines	137,322	1,019	1,642	5,254	31.25	0	56,471	2,639	218
Colonial Airlines	50,684	1,894	1,531	2,636	58.08	0	4,594	664	120
Eastern Air Lines	62,400	1,033	1,095	3,707	29.54	0	14,217	9,651	403
National Airlines	52,540	4,964	1,347	2,894	46.54	4,046	27,474	1,358	0
Northwest Airlines	506,541	4,564	8,037	15,716	51.14	17,875	759,719	186,681	0
Pan American World Airways:									
Atlantic Division	1,190,449	19,748	27,477	44,738	61.42	846,002	0	313,253	77,242
Latin American Division	2,120,002	44,979	42,006	71,985	58.35	2,071,306	0	238,467	0
Alaska Operations	183,746	2,941	3,160	5,183	60.97	378,951	0	38,610	0
Pacific Operations	744,846	4,839	16,216	31,186	52.00	691,878	0	480,200	0
Pan American-Grace Airways	473,714	8,966	8,571	17,837	48.05	0	27,579	4,896	0
Trans World Airlines	1,030,315	8,186	20,538	44,387	46.27	0	639,194	289,340	47,200
United Air Lines	250,563	2,069	5,100	12,594	40.50	0	44,372	54,696	0
Uruba, Medellin & Central Airways	8,528	197	65	134	48.51	4,229	0	0	0
Total	7,245,490	114,103	145,916	278,844	52.33	4,170,207	1,756,583	1,660,984	130,079

Domestic Passenger Miles Flown (Total Revenue and Nonrevenue in Thousands)

	January	February	March	April	May	June	July	August	September	October	November	Total
Trunk	488,983	488,409	574,493	645,184	691,949	789,740	757,007	786,464	750,460	769,609	649,464	7,391,762
Feeder	10,266	10,425	12,551	15,517	17,191	19,322	24,331	21,446	19,754	20,439	17,875	189,117
Territorial	3,547	3,497	3,841	4,351	3,610	4,966	4,736	5,546	3,892	3,472	8,197	44,655
Total	502,796	502,331	590,885	665,052	712,750	814,028	786,074	813,456	774,106	793,520	675,536	7,625,534

Suspensions and Revocations

Recent initial decisions by Civil Aeronautics Board examiners suspending or revoking certificates include the following:

Revocations

Student pilot certificate of Arthur T. Traill, Jr., Houston, Tex., revoked for piloting an aircraft while carrying a passenger.

Student pilot certificate of Phillip Russell Conrath, Webster Groves, Mo., revoked for low flying and performing acrobatics within a civil airway and over the congested area of Webster Groves.

Private pilot certificate of Eugene Bill Mitchell, Wichita, Kans., revoked for low flying and performing acrobatic maneuvers within a civil airway and over a congested area of Wichita, and for performing acrobatics while carrying a passenger who was not equipped with a parachute.

Private pilot certificate of Harry Leonard Lumsden, Richland, Va., revoked for low flying over Cedar Bluffs, and Claypool Hill, Va.; for performing acrobatics while carrying passengers who were not equipped with parachutes; and failing to have in his possession a valid pilot certificate. While he was performing acrobatics the aircraft crashed into a power line, demolishing the aircraft and injuring the occupants.

Private pilot certificate of Walter R. Chittin, III, Ocean City, N. J., revoked for low flying and performing acrobatics over Sea Isle City, N. J. After "buzzing" the boardwalk at Sea Isle City, he lost control of the aircraft and crashed into the ocean.

Private pilot certificate of Leonard Feldman, Philadelphia, Pa., revoked for falsely representing his age in applying for his certificate.

Student pilot certificate of Joffre Gracia, New Bedford, Mass., revoked for low flying and performing acrobatics over congested area of New Bedford and for operating an aircraft in a careless and reckless manner by flying at an altitude of approximately 50 feet over structures and people, executing dives and steep climbing turns.

Private pilot certificate of Leslie Dimmock, Watertown, N. Y., revoked for low flying over the congested area of Watertown, N. Y., performing acrobatics within a civil airway, and operating an aircraft while under the influence of intoxicating liquor. The aircraft was damaged and the occupants injured when pilot crashed while attempting to land.

Private pilot certificate of Rosario R. Sottosanti, Easton, Pa., revoked for low flying in the vicinity of Easton, Pa.

Student pilot certificate of Charles Pelkey Cates, Patten, Maine, revoked for the careless and reckless operation of an aircraft which nearly caused an accident and for piloting an aircraft while carrying a passenger.

Student pilot certificate of Bion Lawrence Jose, New Sweden, Maine, revoked for piloting an aircraft of a type not endorsed on his certificate, for not displaying navigation lights when flying after the hours of darkness, and for carrying a passenger.

Private pilot certificate of Joel E. McGill, Geneva, Fla., revoked for performing acrobatics at a low altitude and carrying a passenger on such flight who was not equipped with a parachute. The flight ended when the aircraft crashed in a celery field near Oviedo, Fla., after going into a spin.

Private pilot certificate of Robert P. Lambert, Whistler, Ala., revoked for low flying in the vicinity of Creola, Ala., while carrying a passenger. The flight ended when the aircraft struck power lines on the side of a highway and crashed.

Private pilot certificate of John Earl Shumate, Jr., Reidsville, N. C., revoked for flying over the congested area of Reidsville at an altitude as low as 50 feet.

Commercial pilot certificate of Darrell Lloyd Jellison, Placerville, Cal., revoked for low flying over the congested area of Placerville while carrying a passenger, failure to conform to the traffic pattern at the Placerville Airport, failure to have in his personal possession pilot and medical certificates, and other violations.

Private pilot certificate of Edward Joseph Brochu, Grand Blanc, Mich., revoked for failure to conform with the traffic pattern at the Dalton Airport, Flushing, Mich., failure to yield the right of way to an aircraft about to land, and failure to familiarize himself with available information pertinent to his intended flight. The pilot, just after becoming airborne after take-off, collided with an incoming aircraft and crashed.

Student pilot certificate of Frederick Frederickson, Windom, Minn., revoked for piloting an aircraft in the vicinity of Jackson, Minn., while carrying a passenger.

Suspensions

Private pilot certificate of Thomas Moore, Horsham, Pa., suspended 6 months from September 28 for operating an aircraft during the hours of darkness when it was not equipped for night flying, and failing to display position lights. The pilot when attempting to land the aircraft at an unlighted airport, collided with an automobile, demolishing the aircraft and causing damage to the automobile.

Private pilot certificate of Patrick C. Volino, Paterson, N. J., suspended 9 months from September 27 for operating an aircraft carrying passengers on a night cross-country flight when adverse weather conditions made such flight hazardous. Shortly after take-off, the pilot encountered icing conditions, lost control of the aircraft and crashed in a wooded area near Newfoundland, Pa.

Private pilot certificate of Anthony R. LaNasa, Niagara Falls, N. Y., suspended 6 months from October 31 for low flying and engaging in acrobatic flight over a congested area in the vicinity of Niagara Falls.

Private pilot certificate of Robert Edward Penick, Jr., Camp Lee, Va., suspended 6 months from October 28 for operating an aircraft in a careless manner so as to endanger the lives and

Scheduled Air Carrier Operations

(Continued on page 21)

Domestic: January–November 1950, 1949

Operator	Revenue miles January–November		Revenue passengers January–November		Revenue passenger-miles (000) January–November		Passenger seat-miles (000) January–November	
	1950	1949	1950	1949	1950	1949	1950	1949
Trunk Lines								
American Airlines.....	52,960,149	51,338,271	3,174,671	3,008,413	1,583,443	1,402,088	2,281,477	2,139,290
Brant Airways.....	10,255,242	10,517,693	583,955	550,599	196,483	183,011	358,200	345,185
Capital Airlines.....	18,947,616	18,793,925	1,248,752	1,109,572	371,718	325,752	692,383	641,141
Chicago & Southern Air Lines.....	6,772,372	6,928,165	300,965	292,908	106,505	99,988	190,652	185,668
Colonial Airlines.....	3,159,624	3,743,982	176,867	180,988	45,520	47,309	91,541	78,714
Continental Air Lines.....	5,315,626	5,227,157	186,539	166,488	65,221	60,440	150,367	145,488
Delta Air Lines.....	13,044,772	11,864,848	578,795	488,117	252,960	192,324	435,195	346,186
Eastern Air Lines.....	47,638,634	48,482,744	2,395,485	2,051,870	1,113,378	925,925	1,802,013	1,631,493
Inland Air Lines.....	2,820,801	2,516,558	83,790	78,471	32,913	28,984	62,967	49,795
Mid-Continent Airlines.....	7,586,246	7,807,034	316,992	313,311	93,588	92,187	176,703	163,948
National Airlines.....	10,299,357	9,147,350	350,802	271,668	216,726	152,970	409,133	340,028
Northeast Airlines.....	3,853,444	3,700,049	343,202	305,974	64,927	58,323	124,758	118,148
Northwest Airlines.....	18,333,297	17,512,458	753,188	676,267	478,887	386,617	838,257	672,860
Trans World Airlines.....	41,751,649	45,644,563	1,431,923	1,296,359	1,007,345	868,963	1,528,214	1,418,946
United Air Lines.....	48,858,688	48,254,825	2,272,878	2,037,635	1,294,821	1,186,436	1,869,794	1,718,907
Western Air Lines.....	7,545,903	5,746,979	414,984	251,208	157,129	95,239	287,196	197,508
Trunk total.....	299,143,420	297,226,601	14,613,788	13,079,848	7,081,564	6,106,556	11,298,850	10,193,305
Index (1949=100).....	100.64	100.00	111.73	100.00	115.97	100.00	110.85	100.00
Feeder Lines								
All American Airways.....	2,845,341	2,347,894	139,758	67,078	19,755	8,999	59,748	40,284
Bonanza Air Lines.....	828,888	-	17,033	-	4,135	-	16,659	-
Central Airlines.....	1,662,241	216,179	9,479	525	1,107	63	5,668	660
Empire Air Lines.....	1,067,080	971,830	41,763	31,382	7,689	6,751	22,407	20,409
Florida Airways (ceased opr. 8/28/49).....	-	193,120	-	3,026	-	409	-	1,542
Frontier Airlines (Challenger Monarch merger eff. 6/1/50).....	3,391,190	3,025,541	58,968	56,615	15,802	14,896	65,691	57,525
Helicopter Air Service.....	301,978	48,256	0	0	0	0	0	0
Lake Central Airlines (formerly Turner Airlines).....	805,180	14,579	11,204	239	1,776	40	11,022	306
Los Angeles Airways.....	309,144	311,246	0	0	0	0	0	0
Mid-Continent Airlines.....	141,302	-	5,660	-	1,228	-	2,967	-
Mid-West Airlines.....	1,422,115	68,434	6,527	189	947	26	5,686	274
Piedmont Aviation.....	3,359,994	2,769,814	112,069	79,077	23,226	16,903	70,560	58,167
Pioneer Air Lines.....	3,412,966	3,510,103	117,107	96,358	31,444	26,157	81,967	64,503
Robinson Airlines.....	1,085,628	819,192	50,811	38,344	8,115	6,753	21,433	16,071
Southern Airways.....	1,644,572	673,893	33,161	9,060	5,703	1,486	34,502	14,763
Southwest Airways.....	2,127,578	2,205,721	109,462	107,416	20,420	19,602	44,680	46,933
Trans-Texas Airways.....	2,773,971	2,651,939	58,160	45,262	13,160	10,558	58,160	55,702
West Coast Airlines.....	1,132,618	1,152,891	62,531	62,109	8,907	8,190	23,745	24,211
Wiggins, E. W. Airways.....	1,408,048	49,957	2,884	292	261	28	1,626	176
Wisconsin-Central Airlines.....	1,880,071	1,479,493	45,161	30,156	7,191	4,550	15,563	12,410
Feeder total.....	30,599,900	22,504,082	881,738	627,123	170,866	124,411	542,124	433,936
Index (1949=100).....	135.97	100.00	140.60	100.00	137.34	100.00	124.93	100.00
Territorial Lines								
Caribbean-Atlantic Airlines.....	504,828	544,725	66,538	73,204	5,349	5,446	12,787	13,226
Hawaiian Airlines.....	2,698,065	2,621,224	298,689	278,541	38,668	38,001	59,496	57,579
Territorial total.....	3,202,893	3,165,949	365,227	351,745	44,017	43,447	72,283	70,805
Index (1949=100).....	101.17	100.00	103.83	100.00	101.31	100.00	102.09	100.00
Grand total.....	332,946,213	322,896,632	15,860,753	14,058,716	7,296,447	6,274,414	11,913,257	10,698,046
Index (1949=100).....	103.11	100.00	112.82	100.00	116.29	100.00	111.36	100.00

property of others. The pilot, believing his gas supply to be practically exhausted, made a landing on a highway near Wadley, Ala., and in doing so, struck and killed the driver of a wagon traveling on the highway.

Private pilot certificate of Russell Zanger, Larchwood, Iowa, suspended 30 days from October 2 for operating an aircraft when it was not in an airworthy condition and failing to have the registration certificate in the aircraft.

Private pilot certificate of Donald Eugene Nichols, Raymond, Wash., suspended 60 days from October 12 for operating an unairworthy aircraft and for failure to make a written report of an accident which resulted in major damage to the aircraft.

Commercial pilot certificate of Troy E. Ahart, Houston, Tex., suspended 30 days and his flight instructor rating suspended 6 months, both periods of suspension from October 27. The pilot, while operating an aircraft in the vicinity of the Sam Houston Airport, Houston, Tex., failed to conform to the traffic pattern and collided with an aircraft making an approach for a landing.

Private pilot certificate of Albert T. Childrest, Kilgore, Tex., suspended 2 months from October 20 for low flying in the vicinity of Henderson, Tex., and failing to conform with the traffic pattern of the Rusk County Airport, Henderson.

Private pilot certificate of Frederic Arthur Hill, Savannah, Ga., suspended 4 months from September 2 for making two landings and a take-off when an air show was in progress at Saffold Field, Savannah, Ga., and the field was clearly marked as closed.

Commercial pilot certificate of Frederick Stewart Lewis, Easton, Md., suspended 30 days from August 25 for nonconformance with air traffic control instructions when landing and taxiing on the Washington National Airport, Washington, D. C.

Private pilot certificate of Billy Ray Godwin, Blytheville, Ark., suspended 60 days from September 13 for low flying in the vicinity of Blytheville, Ark., which resulted in the aircraft striking electric and power lines and severely damaging the aircraft.

Commercial pilot certificate of Charles Reed Rogers, Houston, Tex., suspended 6 months from October 9 for operating an air-

craft at an altitude of 25 to 50 feet over cars and persons on a highway between Genoa and Lamarque, Tex.

Private pilot certificate of Kenneth Wayne Clemens, Port Neches, Tex., suspended 60 days from October 6 for operating an aircraft at an altitude of 15 to 20 feet above the roof tops of residences in Nederland, Tex.

Student pilot certificate of Robert Harold Leedy, Kansas City, Mo., suspended 30 days from September 22 for low flying over a congested area of Manhattan, Kans.

Private pilot certificate of Lawrence H. Cup Choy, Maunaloa, Molokai, T. H., suspended 6 months from September 23 for driving an aircraft to within 50 to 90 feet of persons and property in the vicinity of Maunaloa, Molokai, T. H.

Private pilot certificate of William H. Shay, Carbon Cliff, Ill., suspended 6 months from September 30 for operating an aircraft at an altitude of 150 to 200 feet over the congested residential area of East Moline, Ill.

Private pilot certificate of Omar Lunsford, Frankfort, Ky., suspended 6 months from September 2 for starting an aircraft when no one was at the controls without chocking the wheels or setting the brakes, thereby permitting the aircraft to move uncontrolled and collide with another aircraft.

Private pilot certificate of Dean L. Thompson, Evergreen Park, Ill., suspended 6 months from September 2 for performing acrobatics when the occupants of the aircraft were not equipped with parachutes, performing acrobatics within a civil airway, and failing to have a pilot certificate in his personal possession.

Commercial pilot certificate of George Albert Pottinger, Cincinnati, Ohio, suspended 3 months from September 5 for permitting pamphlets and parachutes with flare caps attached to be dropped from an aircraft when he was the operator thereof, for operating an aircraft in a reckless manner by permitting the dropping of such parachutes which entangled with the tail assembly thereby causing a forced landing, and failing to have in his personal possession pilot and medical certificates. The violations occurred in the vicinity of the University of Cincinnati, Cincinnati, Ohio.

Scheduled Air Carrier Operations

(Continued from page 20)

Domestic: January–November 1950, 1949

Operator	Revenue passenger load factor (percent)		Ton-miles flown					
	January–November		Express January–November		Freight January–November		United States mail January–November	
	1950	1949	1950	1949	1950	1949	1950	1949
Trunk Lines								
American Airlines.....	69.40	65.54	6,402,437	4,891,509	31,629,434	28,258,873	8,676,794	7,793,383
Brantiff Airways.....	54.85	53.02	924,166	736,719	1,780,120	1,031,573	1,149,123	950,199
Capital Airlines.....	53.69	50.81	2,055,236	1,537,263	7,641,904	6,312,498	1,336,113	936,508
Chicago & Southern Air Lines..	55.86	53.85	643,808	485,422	812,580	567,685	532,863	466,245
Colonial Airlines.....	49.73	60.10	74,970	61,432	97,638	97,668	55,325	87,806
Continental Air Lines.....	43.37	41.54	93,556	86,840	445,122	338,993	179,144	185,941
Delta Air Lines.....	58.13	55.56	937,332	627,247	2,806,033	1,678,930	1,074,120	777,751
Eastern Air Lines.....	61.79	56.75	3,768,215	3,088,519	9,524,841	7,487,076	4,404,000	4,313,073
Inland Air Lines.....	52.27	58.21	62,885	58,720	150,290	116,066	113,874	104,931
Mid-Continent Airlines.....	52.96	56.23	213,356	191,116	464,447	311,083	300,530	279,582
National Airlines.....	52.97	44.99	481,202	465,794	2,666,919	1,070,539	585,040	472,450
Northeast Airlines.....	52.04	49.36	161,970	88,519	273,953	210,639	104,941	81,590
Northwest Airlines.....	57.13	57.46	1,837,611	1,470,546	6,402,679	4,056,840	2,240,211	2,201,057
Trans World Airlines.....	65.92	61.24	5,432,474	4,342,148	12,211,018	10,900,075	7,903,247	7,839,900
United Air Lines.....	69.25	69.02	7,842,546	5,593,346	25,572,148	21,247,594	10,675,417	9,068,342
Western Air Lines.....	54.71	48.22	456,474	274,018	639,073	373,220	734,243	363,575
Trunk total.....	62.68	59.91	31,388,438	23,999,158	108,118,199	84,059,352	40,092,989	35,922,333
Index (1949=100).....	104.62	100.00	130.79	100.00	122.67	100.00	111.61	100.00
Feeder Lines								
All American Airways.....	33.07	22.34	104,186	54,294	0	0	37,540	36,127
Bonanza Air Lines.....	24.82	-	1,796	-	8,590	-	4,759	-
Central Airlines.....	19.53	9.55	0	0	0	0	14,274	2,061
Empire Air Lines.....	34.32	38.08	16,837	13,450	0	0	17,866	18,283
Florida Airways (ceased opr. 3/28/49).....	-	26.52	-	660	-	0	-	1,812
Frontier Airlines (Challenger-Monarch merger eff. 6/1/50).....	24.06	25.89	49,297	48,708	148,921	150,312	62,116	56,694
Helicopter Air Service.....	-	-	0	0	0	0	18,317	2,739
Lake Central Airlines (formerly Turner Airlines).....	16.11	13.07	32,003	62	0	0	4,847	88
Los Angeles Airways.....	-	-	0	0	0	0	38,294	38,118
Mid-Continent Airlines.....	41.39	-	4,972	0	7,551	-	2,737	885
Mid-West Airlines.....	16.65	9.49	0	1	122,674	55,870	46,154	27,879
Piedmont Aviation.....	32.92	29.06	73,855	35,659	124,437	68,633	87,930	74,270
Pioneer Air Lines.....	30.36	42.964	28,226	1,402	32,657	14,596	20,335	16,032
Robinson Airlines.....	37.86	35.80	37,895	12,577	0	0	40,334	13,906
Southern Airways.....	16.53	10.07	38,124	30,674	118,218	81,044	41,471	44,126
Southwest Airways.....	45.70	41.77	43,679	19,204	54,418	20,495	47,598	53,707
Trans-Texas Airways.....	22.63	18.95	27,202	10,905	13,598	0	6,576	8,689
West Coast Airlines.....	37.45	33.83	10,815	0	0	0	1,554	304
Wiggins, E. W. Airways.....	16.05	15.91	0	0	0	0	35,880	17,938
Wisconsin-Central Airlines.....	46.21	36.66	43,902	19,628	0	0	0	0
Feeder total.....	31.52	28.67	527,527	275,450	631,064	390,950	545,085	413,158
Index (1949=100).....	109.94	100.00	191.51	100.00	161.42	100.00	131.93	100.00
Territorial Lines								
Caribbean-Atlantic Airlines....	41.83	41.18	0	0	23,750	28,258	8,935	6,858
Hawaiian Airlines.....	64.99	66.00	106,810	111,437	434,862	525,098	48,002	51,710
Territorial total.....	60.90	61.36	106,810	111,437	458,612	553,356	56,937	58,568
Index (1949=100).....	99.25	100.00	95.85	100.00	82.88	100.00	97.22	100.00
Grand total.....	61.25	58.65	32,022,775	24,386,045	104,207,875	85,003,658	40,695,011	36,394,059
Index (1949=100).....	104.43	100.00	131.32	100.00	122.59	100.00	111.82	100.00

CAB Official Actions

(Continued from page 18)

E-4927 consolidates proceeding of investigation and suspension instituted by order serial No. E-4777 into this proceeding and institutes investigation of the fares, rules, and regulations proposed by National Airlines; suspends and defers their use from December 25, 1950, to March 24, 1951 (December 12).

E-4928 dismisses application for approval of interlocking relationships of Piedmont Aviation and its officers and directors (December 12).

E-4929 dismisses petitions of the city of Alexandria, Minn., and the city of Bemidji, Minn., in the Wisconsin Central Certificate Renewal case (December 13).

E-4930 dismisses petition of Chicago and Southern Air Lines in the Indiana-Ohio Local Service case (December 13).

E-4931 grants Midet Aviation Corp. exemption for 1 year from provisions of part 291 of the economic regulations and section 401 (a) of the Act, so as to permit it to engage in regular air transportation between Walker City, Bahamas, B. W. I., and West Palm Beach, Fla., utilizing specified type aircraft (December 13).

E-4932 extends dates for filing petitions for reconsideration and through service agreements in the Through Service proceeding and the Kansas City-Memphis-Florida case (December 13).

E-4933 fixes certain temporary mail rates for Lake Central Airlines (formerly Turner Airlines) (December 13).

E-4934 consolidates application of the city of Thief River Falls, Minn., docket No. 4753, with the Wisconsin Central Certificate Renewal case, docket No. 4387 (December 14).

E-4935 supplemental opinion and order issue amended certificate to Trans-Texas Airways for route No. 82; petitions denied in all other respects (December 14).

E-4936 fixes certain temporary mail rates for Mid-West Airlines (formerly Iowa Airplane Co.) (December 14).

E-4937 amends order serial No. E-2755, fixing final mail rates for Mid-Continent Airlines over its entire trunk line route system, and excluding route No. 106 (December 14).

E-4938 fixes certain temporary mail rates for Mid-Continent Airlines over its route No. 106 (December 14).

E-4939 denies Hardy Aviation exemption which would permit it to engage in certain air transportation as authorized by part 291; terminates temporary exemption (December 15).

E-4940 authorizes Pan American World Airways to suspend service at Corpus Christi, Tex., for 6 months, with stated provision (December 19).

E-4941 grants Ozark Airlines permission to inaugurate service on or after December 20, 1950, to Cairo, Ill., through the use of Cairo Airport (December 19).

E-4942 grants Aerovias "Q" permission to inaugurate service on December 20, 1950, to Tampa, Fla., through use of Tampa International Airport (December 19).

E-4943 grants Lake Central Airlines exemption through December 29, 1950, from the provisions of section 401 (a) of the Act and of its certificate for route No. 88 so as to permit certain nonstop flights carrying air express only (December 16).

E-4944 amends order serial No. 4889, dated June 17, 1946, to include the Georgia, Florida and Alabama Railroad Co. in the matter of applications for approval of interlocking relationships (December 18).

E-4945 grants Northwest Airlines exemption, subject to stated conditions, from the provisions of section 401 (a) of the Act, so as to permit it to serve Pusan, Korea, in lieu of Seoul on its Pacific route (December 18).

E-4946 grants Baltimore Association of Commerce permission to intervene in the matter of fares, rules, and charges proposed by National Airlines (December 18).

E-4947 dismisses application of Showalter Corp. in the matter of an application for a certificate (December 19).

E-4948 dismisses application of Cargo Airlines in the matter of its application for a certificate (December 19).

Helpful Publications

Publications listed below are on sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Orders must be accompanied by money order or check made payable to the Superintendent of Documents.

Flight Assistance

Airman's Guide and Flight Information

Manual..... \$6 a year

(The Airman's Guide, published every 2 weeks, contains three sections: Directory of Airports, Radio Facility Data, and Notices to Airmen. The Flight Information Manual supplements the Airman's Guide and is issued semiannually.)

Airports

Airport Buildings..... 20 cents

(Problems of airport building design are discussed and several solutions suggested.)

Airport Design..... 30 cents

(Provides basic information on airport construction.)

Airport Drainage..... 30 cents

(Contains information helpful in developing an efficient and economical airport drainage system.)

Airport Landscape Planting..... 15 cents

(Provides practical information on how to improve the appearance of an airport.)

Airport Turfing..... 25 cents

(Describes various problems involved and presents methods used in establishing and maintaining a good turf.)

Seaplane Facilities..... 25 cents

(Answers problems posed by the planning and construction of seaplane bases.)

Small Airports..... 15 cents

(Answers many problems confronting communities or individuals who want to build a small airport.)

Standard Specifications for Construction of Airports..... \$2

(Contains specification items for construction of airports and air parks. Covers clearing and grubbing, grading, drainage, paving, lighting, turfing, and incidental construction.)

Flight Training

Aircraft Powerplant Handbook..... \$1.25

(For students, mechanics, pilots, and engineers who have only superficial knowledge of aircraft powerplant fundamentals.)

Facts of Flight..... 50 cents

(A nontechnical manual, with chapters on airplane flight, stalls, spins, airplane structure, airplane engines, flying the plane, airport traffic, seaplanes, and safety in flight.)

Path of Flight..... 40 cents

(Practical information about basic navigation of aircraft, presented in brief form for the use of the private pilot.)

Realm of Flight..... 60 cents

(Presents practical information about the effect of atmospheric conditions upon flight.)

Commercial Pilot Examination Kit..... 30 cents

(Contains a summary of subject matter on which the examination is based, reference material for study, and four groups of examination questions similar to those used in the official certifying examination.)

Flight Instructor Oral Examination Guide-book..... 5 cents

(Prepared as an aid to the prospective applicant for a flight instructor rating.)

Miscellaneous

ANC Procedures for the Control of Air Traffic..... 40 cents

(Officially approved manual of air traffic control procedures adopted for use by civil and military air traffic control personnel. These procedures are required to be followed by all civil controllers holding certificates under Part 26 of the CAR.)

Industrial Flying..... 10 cents

(A brief description of various uses for the airplane in industrial flying.)

Student Pilot Guide..... 10 cents

(Presents information of particular importance to student pilots during the early stages of flight training.)

Terrain Flying..... 25 cents

(Describes the special problems and hazards encountered in flying over various kinds of terrain and proper precautions.)

The Air Fair..... 20 cents

(Gives detailed helps in planning and operating an air fair.)

Regulations of The Administrator

Through February 1, 1951

Note: Regulations of the Administrator marked with an asterisk (*) on the list given below may be obtained from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C., at the prices indicated. Remit check or money order, made payable to the Superintendent of Documents, directly to the Government Printing Office. Copies of amendments may be obtained free of charge from the Office of Aviation Information, CAA, Washington 25, D. C., or may be found in the Federal Register for the dates indicated in parentheses. Copies of the Federal Register are obtainable from the Superintendent of Documents.

Procedures

- *Part 405—General Procedures. (5¢.)
- *Part 406—Certification Procedures. (10¢.)
- *Part 407—Recordation Procedures. (5¢.)
- *Part 408—Enforcement Procedures. (5¢.)

Rules

Airmen

- *Part 450—Inter-American Aviation Training Grants. (5¢.)

Aircraft

- *Part 501—Aircraft Registration Certificates. (5¢.)
- *Part 502—Dealers' Aircraft Registration Certificates. (5¢.)
- *Part 503—Recordation of Aircraft Ownership. (5¢.)
- *Part 504—Recordation of Encumbrances Against Specifically Identified Aircraft Engines. (5¢.)
- *Part 505—Recordation of Encumbrances Against Aircraft Engines, Propellers, Appliances, or Spare Parts. (5¢.)
- Part 514—Technical Standard Orders — C Series — Aircraft Components. (January 25.)

Airports

- *Part 550—Federal Aid to Public Agencies for Development of Public Airports. (10¢.)
- (Amendments 1-12 available from CAA.)
- *Part 555—Acquisition of Government-owned Lands for Public Airport Purposes. (5¢.)
- *Part 560—Reimbursement for Damage to Public Airports by Federal Agencies. (10¢.)
- (Amendment 1 available from CAA.)
- *Part 570—Rules of Washington National Airport. (5¢.)
- (Amendment 1 available from CAA.)
- *Part 575—Federal Civil Airports on Canton and Wake Islands. (5¢.)

Air Navigation

- *Part 600—Designation of Civil Airways (including amendments 1 through 18). (15¢.)
- (Amendments 19-34 available from CAA.) Amendment 35 (November 28, 1950).
- *Part 601—Designation of Control Areas, Control Zones and Reporting Points (including amendments 1 through 22). (15¢.)
- (Amendments 23-37 available from CAA.) Amendment 38 (November 28, 1950).
- *Part 612—Aeronautical Fixed Communications. (5¢.)
- *Part 620—Security Control of Air Traffic. (5¢.)
- *Part 625—Notice of Construction or Alteration. (5¢.)

Miscellaneous

- Part 635—Reproduction and Dissemination of Current Examination Materials. (Available without charge from CAA.)

Meteor Ordered by Board To End Economic Violations

The Civil Aeronautics Board last month ordered Meteor Air Transport, Inc., a large irregular air carrier with headquarters at Teterboro, N. J., to cease and desist from economic violations of the Civil Aeronautics Act.

The Board found that Meteor had knowingly and willfully "conducted operations as a common carrier in excess of those permitted" under the Board's regulations governing large irregular air carriers, and under section 401 of the Civil Aeronautics Act; had charged and received fares and charges different from those shown in its effective tariffs on file with the Board and had provided like and contemporaneous services at different rates, subjecting traffic to unjust discrimination.

In issuing a cease and desist order enjoining Meteor from continuing the violations under consideration, the Board said: "Although we have found that Meteor's violations of the Act have been knowing and willful, we are not disposed to employ the drastic remedy of outright revocation of Meteor's letter of registration."

Air Regulations . . . February 1, 1951

TITLE	No.	Price	Date	Number of Amendments	Applicable Special Regulations
AIRCRAFT					
Certification, Identification, and Marking of Aircraft and Related Products	1	\$0.05	1/15/51		
Airplane Airworthiness; Normal, Utility, Aerobatic, and Restricted Purpose Categories	1a	.15	11/ 1/49	4	SR-358,360
Airplane Airworthiness	4a	.20	4/ 7/50		SR-358,360
Airplane Airworthiness; Transport Categories	14b	.25	7/20/50	3	SR-358,360
Rotorcraft Airworthiness	6	.10	1/15/51		SR-358,360
Aircraft Airworthiness; Restricted Category	8	.05	10/11/50		
Aircraft Airworthiness; Limited Category	9	.05	11/ 1/49	1	
Aircraft Engine Airworthiness	13	.05	8/ 1/49	2	SR-358
Aircraft Propeller Airworthiness	14	.05	11/ 1/49	2	SR-358
Aircraft Equipment Airworthiness	15	.05	11/ 1/49	3	SR-358,360
Aircraft Radio Equipment Airworthiness	16	.05	2/13/41		
Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments	18	.05	8/15/49		
AIRMEN					
Pilot Certificates	20	.05	8/ 1/49	5	
Lighter-than-air Pilot Certificates	21	.05	8/15/49	2	
Mechanic Certificates	22	.05	11/ 1/49	3	SR-348
Parachute Technician Certificates	25	.05	9/ 5/50		
Air-traffic Control-tower Operator Certificates	26	.05	11/ 1/49	2	
Aircraft Dispatcher Certificates	27	.05	11/ 1/49	2	
Physical Standards for Airmen	29	.05	10/ 1/49	1	
Flight Radio Operator Certificates	33	.05	2/15/50	1	
Flight Navigator Certificates	34	.05	11/ 1/49	2	SR-359
Flight Engineer Certificates	35	.05	11/ 1/49	1	
OPERATION RULES					
Air Carrier Operating Certification	40	.05	9/ 1/49		SR-346, 349, 351, 355, 356
Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States	41	.05	11/15/49	3	SR-349, 356, 360
Irregular Air Carrier and Off-Route Rules	42	.10	6/ 1/49	6	SR-337, 349, 350, 360
General Operation Rules	43	.05	8/ 1/49	5	SR-360
Foreign Air Carrier Regulations	44	.05	9/ 1/49		
Commercial Operator Certification and Operation Rules	45	.05	11/15/49	1	SR-337, 349, 356
Operation of Moored Balloons	48	.05	9/ 1/49		
Transportation of Explosives and Other Dangerous Articles	49	.10	7/20/49		
AIR AGENCIES					
Airman Agency Certificates	50	.05	10/ 1/49	2	SR-354,355
Ground Instructor Rating	51	.05	10/10/49	1	
Repair Station Rating	52	.05	10/15/49		
Mechanic School Rating	53	.05	10/15/49		
Parachute Loft Certificates and Ratings	54	.05	10/15/49	1	
AIR NAVIGATION					
Air Traffic Rules	60	.10	8/ 1/49		
Scheduled Air Carrier Rules	61	.10	9/ 1/49	3	SR-346, 349, 350, 356, 360
Notice and Reports of Aircraft Accidents and Missing Aircraft	62	.05	5/ 1/49		

1 Certain aircraft may comply with the provisions of this Part or Part 4a.

NOTE: Civil Air Regulations are on sale at the prices indicated by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Amendments and special regulations may be obtained from the publications Section, Civil Aeronautics Board, Washington 25, D. C.

CAA Manuals and Supplements . . . Feb. 1, 1951

TITLE	No.	Price	Date	No. of Supplements	Amending Release
Production Certificates	02	\$0.10	8/ 1/46		
Airplane Airworthiness; Normal, Utility, Aerobatic, and Restricted Purpose Categories	3	Free		5	
Airplane Airworthiness	04	.75	7/ 1/44		Nos. 193, 202
Airplane Airworthiness; Transport Categories	4b	Free		5	
Aircraft Propeller Airworthiness	14	.20	5/ 1/46		(Being revised)
Aircraft Equipment Airworthiness	15				Nos. 62, 272
Aircraft Radio Equipment Airworthiness	16	Free	2/13/41		
Maintenance, Repair, and Alteration of Certificated Aircraft, Engines, Propellers, and Instruments	18	1.25	8/ 1/49		
Pilot Certificates	20	Free	6/16/50	1	
Air-Traffic Control-Tower Operator Certificates	26	Free		3	
Aircraft-Dispatcher Certificates	27	Free		2	
Flight Radio Operator Certificates	33	Free	6/16/50	1	
Flight Navigator Certificates	34	Free		1	
Flight Engineer Certificates	35	Free	1/ 2/51	1	
Air Carrier Operating Certification	40	Free		3	
Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States	41	Free		12	
Irregular Air Carrier Certification and Operation Rules	42	1.00	9/ 1/49	2	
General Operation Rules	43	Free		4	
Airman Agency Certificates	50	.15	5/15/46	4	No. 254
Repair Station Rating	52	Free		1	
Mechanic School Rating	53	Free	5/—/40		
Parachute Loft Certificates and Ratings	54	.15	7/ 1/48		
Instrument Approach Procedure	60	Free		4	
Scheduled Air Carrier Rules	61	Free		8	

NOTE: Manuals for which a price is listed may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Items marked "free" may be obtained from the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.

Defective Sight Not Safety Hazard, Survey of Private Pilots Reveals

Pilots who cannot meet the CAA standards in vision for private pilot certificates learn to fly more slowly but in their later flying, have just as good safety records as those who can meet the standards, according to a research study made for the Civil Aeronautics Administration.

"The findings of this report," the Committee on Aviation Psychology of the National Research Council advised the CAA, "should do much to allay the concern which has been expressed in some quarters with respect to the CAA policy of permitting individuals with defective vision to qualify for the private flight certificate." David Bakan and E. S. Ewart conducted the study; which was published as CAA's Division of Research Report No. 94.

Research Confirms Previous Studies—The results reported by this research committee confirm several other studies made by the CAA during the last ten years. This study, however, is important because in comparing the flight records of the sub-standard visual group with those who met CAA standards, the experimenters found that the amount of flying done by the two groups was approximately equal.

This, therefore, is the first study in which the exposure rates or the amount of flying done by each group was known.

It is also important because most of the rejections of applicants for pilot certificates have been due to failure to meet the visual standards.

An earlier study of pilots with defective vision took place in 1945 and 1947, when the CAA asked the same committee to determine whether, and how well, students with poor vision could learn to fly. This study showed that such students generally learned more slowly, and that a larger percentage of them "washed out" before obtaining certificates, but the report made the following recommendations: that "visual defectives" be informed in advance that the probability of their obtaining a pilot certificate is lower than those with better visual efficiency, and that in flight testing such applicants special emphasis be placed on areas in which they showed least ability.

Training was given 194 students, including those with normal vision, those with vision corrected to normal with eyeglasses and those with considerable visual deficiency not necessarily correctible to normal even with glasses.

Questionnaire Sent to 194 Subjects—In the latest study, a questionnaire was sent to these 194 subjects, some receiving it 29 months after they had learned to fly, and others as much as 44 months afterward, due to the fact that they were taught originally over a period of two years. Thus the "exposure" to flying was not uniform. Replies were received from 94 subjects.

Range of flying time, among the 94, was from 15 minutes to 520 hours. There was little difference, however, in the median flying time between those with normal and those with sub-normal vision, either in local or cross-country flying.

No accidents were recorded in the Civil Aeronautics Board against any of the 194 pilots, those who answered and those who did not and the 94 who replied reported only four minor accidents, none of which was serious enough to get into CAB records. Two who reported minor accidents were from the group with good vision, one from the group with vision corrected by glasses and the fourth from the group with one eye. The accidents involved breaking of a propeller while parking, pancaking and breaking a tail wheel bolt, overshooting a field, and running into a cornfield alongside the runway while taking off in a crosswind.

Where an applicant has a definite physical deficiency, the CAA now provides that he take a special flight examination to assure, as far as possible, that this deficiency will not affect adversely safety in flying. This has been the policy of the CAA for about five years.

227 Civil Aircraft Shipped During Month of November

Civil aircraft shipments in November 1950 totaled 227 planes, weighing 430,400 airframe pounds, valued at \$7,225,000, according to a report issued jointly by the Civil Aeronautics Administration and the Bureau of the Census, Department of Commerce. Comparable figures for November 1949 were 158 planes, weighing 527,300 airframe pounds, valued at \$11,475,000.

For the first 11 months of 1950, civil shipments amounted to 3,200 aircraft weighing 5,151,600 airframe pounds, valued at \$84,253,000. For the same period of 1949, civil shipments totaled 3,429 aircraft, weighing 6,160,200 airframe pounds, valued at \$107,046,000.

The civil transport backlog increased by 8 planes during November 1950, moving up from 224 to 232. On November 30, 1949, the civil transport backlog was 84 planes.

Comparative figures on civil aircraft shipments for October and November 1950, as well as for November 1949 follow:

Civil Aircraft Shipments

	1950		1949
	Novem- ber	October	Novem- ber
Number (total)....	227	204	158
Number by type:			
Personal.....	215	198	148
Transport.....	12	6	15
Number by place:			
1- and 2-place.....	64	46	37
3- to 5-place.....	151	152	106
Over 5-place.....	12	6	15
Airframe weight (thou- sand lbs.):			
Personal.....	174.6	163.6	113.7
Transport.....	255.8	170.0	418.6
Value (thousand dollars)...	\$11,528	\$9,368	\$16,624
Complete aircraft.....	7,225	5,118	11,475
Parts.....	2,392	2,264	2,799
Other products.....	1,911	1,986	2,350

Board Announces Selection Of Director for New Bureau

The Civil Aeronautics Board last month announced the appointment of Gordon M. Bain as Director of the Board's new Bureau of Air Operations. The Board said the new bureau, which absorbed the functions and personnel of the Bureau of Economic Regulation, will have primary responsibility for all presently designated economic operating activities, including rates, routes, carrier agreements, reports, statistics and related accounting data, in addition to new legal responsibilities.

Prior to coming with the Board, Mr. Bain served as Executive Officer of the Civil Aeronautics Administration's Sixth Region with headquarters in San Francisco, Calif.

Jobs in Alaska Open For Communicators and CAA Maintenance Men

Would you like to work where you can pan for gold, collect fine furs, catch big fish, shoot your own meat for the winter? The Civil Aeronautics Administration announced January 21 it had openings for 70 Aircraft Communicators and 30 maintenance technicians in Alaska.

CAA Alaskan salaries begin at \$3875 for both communicators and maintenance men, including the 25 percent differential for "foreign" pay, and men selected will be in line for higher grade jobs paying up to \$5750.

Posts of duty may be at any of the stations along the 8,000 miles of Alaskan airways, some of them in cities like Anchorage, Fairbanks, or Juneau, and some in remote and fascinating spots like Farewell, Moses Point, Unalakleet, or down in the famous Kenai Peninsula, which hardy Alaskans call the "banana belt" because of its beauty and the comparative luxury of living and working conditions.

CAA reports that the great majority of its 1,500 Alaska employees like life in the Territory. They plunge into its novelties and adventures in their off hours, panning gold along the shore near Yakataga, or Nome, fishing in the teeming lakes and rivers, shooting their moose each fall and storing the meat away for winter, and the lady of the house assembles a beautiful fur wardrobe and collects carved ivory objects which make her the envy of her stateside acquaintances. CAA admits frankly, however, that for some Alaska quickly loses its allure and they seize the first opportunity to get transferred "outside". Naturally, the CAA prefers not to train and transport workers to Alaska for less than a 2-year employment period.

CAA Provides Training—Communicators are trained by the CAA at its Oklahoma City Aeronautical Training Center; technicians usually receive training on the job. Applicants are paid salary during training and are also given a per diem allowance for subsistence. Applicants, other than veterans, must be between 18 and 40, in good health and with good hearing, vision, and speech. Both married and single men are acceptable.

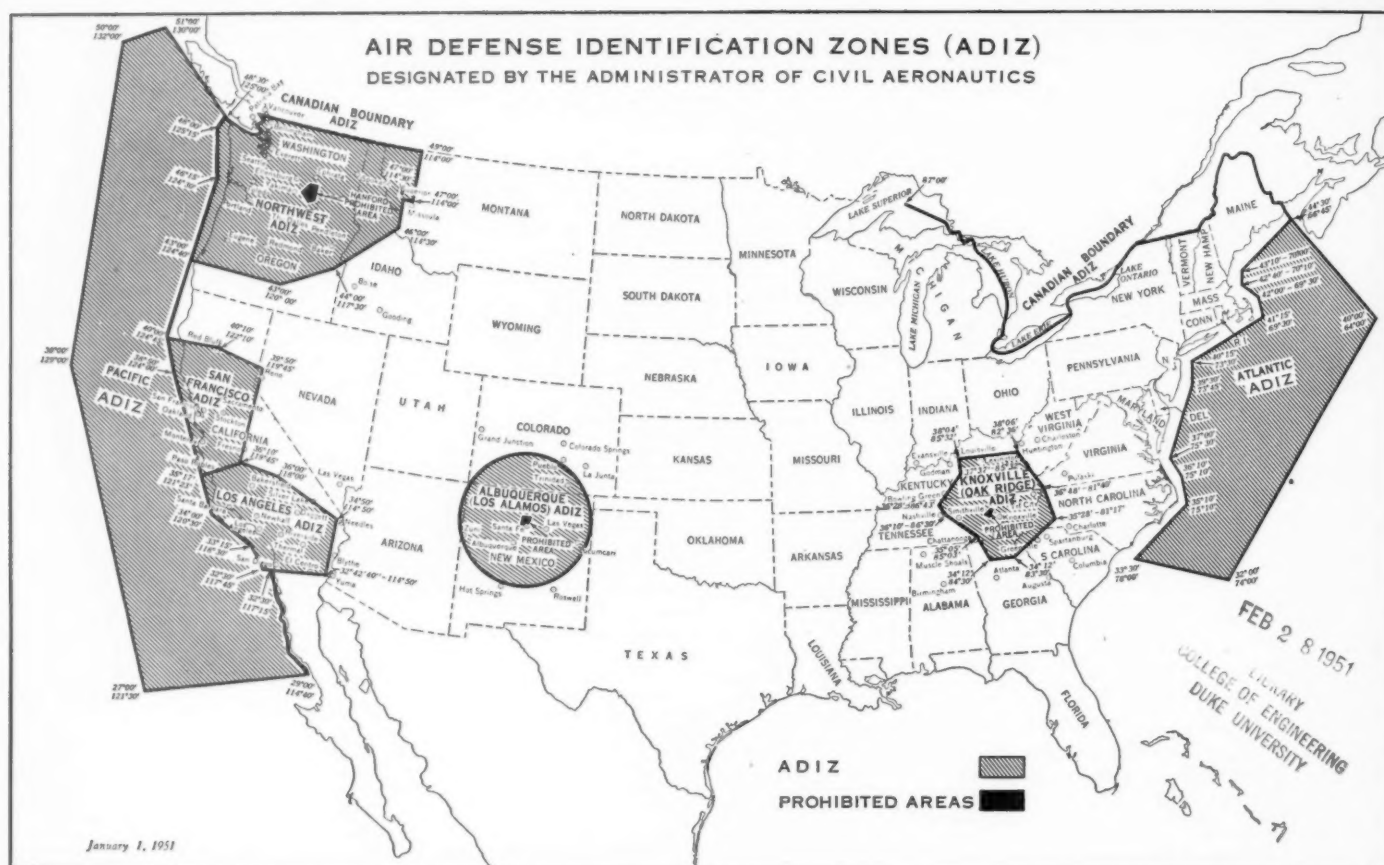
Basic qualifications for communicators are the ability to transmit and receive international Morse code at minimum speed of 25 words a minute; to touch-typewrite at 35 words a minute; and 3 years of general communications experience or an acceptable equivalent in education and experience. Slight code deficiencies can be allowed if it appears that they can be compensated during orientation training.

Two kinds of maintenance technicians are needed. Radio technicians must have had experience as amateur operators, as maintenance workers with airlines, as electricians or in radio and radar service work. Other maintenance men needed to keep the airways in operation in Alaska would work with the diesel and gasoline engines used as power equipment for airways facilities, and applicants should have had experience in such work.

Those interested should file the usual form 57 with the CAA's Aeronautical Training Center at Oklahoma City.

Airport Landscaping Discussed

"Airport Landscape Planting" is a CAA publication intended as a guide for those interested in landscaping airports. The 20-page booklet is on sale by the Government Printing Office for 15 cents.



Flight plans and position reports are mandatory for planes entering or flying within defense identification zones shown on the above map so that the Air Force can recognize friendly aircraft. In identification zones within the United States, the flight plans and position reports are not required for aircraft operating less than 4,000 feet above the im-

mediate terrain. This exemption permits aircraft without radio to fly within identification zones, providing they remain below that altitude. Prohibited areas (shown as solid black areas) within the zones remain out of bounds for all aircraft.

CAA Releases Figures On Airways Facilities

The Civil Aeronautics Administration has released the following figures on facilities maintained and operated by the Office of Federal Airways, as of December 31, 1950:

Civil Airways.—Controlled civil airways, mileage 70,253; noncontrolled civil airways, mileage 4,624; oceanic routes, mileage 21,086.

Landing Areas.—Intermediate fields, 102; jointly operated fields, 53.

Lighting Aids.—Airways beacons (excluding those at landing areas), 978; neon approach light lanes, 91; high intensity approach light lanes, 13.

Air Navigation and Landing Aids.—L/MF ranges, 378; VHF visual aural ranges, 56; VHF omniranges, 315 (28 operating on test; 287 commissioned); L/MF omniranges, 1; high-power nondirectional radio beacons, 4; low/medium power nondirectional radio beacons, 137; compass locators, 180; fan markers, 282; instrument landing systems, 96; airport surveillance radar, 7; precision approach radar, 7.

Communications Stations.—Interstate airways, 451; overseas-foreign airways, 15.

Traffic Control Facilities.—Airport traffic control towers, 172; air route traffic control centers, 31; mechanical interlocks, 12.

Teletype and Interphone Services.—Weather Reporting Circuits: circuit mileage, teletype services

New Flight Plan Form Devised

A new form which will make it easier to file flight plans has been completed by the Civil Aeronautics Administration, and will be distributed throughout the United States as soon as printing can be completed.

Flight plans are now compulsory for most flights into or within air defense identification zones (ADIZ). The new flight plan form will cover visual flight rule (VFR) flight plans, instrument flight rule (IFR) flight plans, and defense visual flight rule (DVFR) flight plans.

The new forms do not differ radically from the flight plan forms now in use. However, less information is required for visual flight plans, and ample space is provided for the additional security information required for DVFR flights.

The present flight plan forms will be used for all flights, including DVFR, until the new forms are generally available—probably late in February.

A, C, and O, 80,285; circuit drops, teletype services A, C, and O, 937. Traffic Control Circuits: circuit mileage, teletype service B, 33,629; circuit drops, teletype service B, 476; circuit mileage, interphone service F, 61,318; circuit drops, interphone service F, 3,276.

Record Number of Passengers Handled by WNA Last Year

Washington National Airport, the only commercial airport owned by the United States Government and operated by the Civil Aeronautics Administration, handled a record number of scheduled airline passengers during 1950. The total was 1,629,723 passengers, an increase of almost 243,000 passengers or 18 percent over 1949. This was the fifth successive year that this airport has handled more than 1,000,000 passengers.

Indicative of the shift toward bigger transport aircraft, the 1950 record passenger volume was handled with somewhat fewer scheduled air carrier aircraft arrivals and departures than in 1949. Scheduled operations at Washington National Airport from its opening in 1941 are shown below:

Washington National Airport Scheduled Airline Traffic

Calendar year	Passenger arrivals and departures	Aircraft arrivals and departures
1941 (6½ months)	344,257	86,251
1942	459,396	47,101
1943	860,563	37,264
1944	657,145	52,596
1945	756,537	76,143
1946	1,230,480	105,167
1947	1,140,945	105,224
1948	1,186,676	118,765
1949	1,386,887	121,186
1950	1,629,723	116,398

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